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STOCKTON-ON-TEES CORPORATION.

REPORT

OF THE

Medical Officer of Health

TO THE

TOWN COUNCIL

for the year 1931.

G. C. M. M'GONIGLE, M.D., B.S., B.Hy., D.P.H.
Medical Officer of Health ;
Medical Superintendent of Isolation Hospital ;
School Medical Officer.

Stockton-on-Tees
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BOROUGH OF STOCKTON-ON-TEES.

TOWN COUNCIL.

His Worship the Mayor (Alderman W. J. Scaife). *†

Alderman C. W. Allison*
,, G. H. Douthwaite*
,, R. Dysert*
,, J. W. Gargett†
Chairman Maternity and Child Welfare Committee
Alderman J. Goldston*

Alderman J. McNaughton
,, E. Pickworth
,, J. Riley
,, R. Spark*
Chairman Health Committee
Alderman W. Thompson

Councillor G. Bell
,, T. W. Bowman
,, H. Bridges
,, W. Brown
,, T. Bulmer*†
,, E. Coates
,, A. Curry
,, H. Dixon* †
,, J. Gibbons*†
,, R. Gibson*†
,, Mrs. S. A. Hepton*†
,, H. Hodgson
,, W. F. Tyson Hodgson
,, J. T Johnson*
,, M. M. Kelly*
,, H. E. Kitching
,, G. T. Lane†

Councillor A. Lewis*
,, W. Lillystone
,, G. R. McLean
,, W. Newton
,, J. K. Reay
,, E. E. Richards†
,, A. Ross
,, G. Sawyer
,, R. B. Simpson
,, J. Stoddart*†
,, A. J. Thatcher
,, G. Thornton
,, W. Wake*
,, J. B. Walton
,, J. E. Wilyman†
,, W. M. Worth

*Members of the Health Committee. †Members of the Maternity and Child Welfare Committee.

PUBLIC HEALTH OFFICERS OF THE LOCAL AUTHORITY.

Medical.

G. C. M. M'Gonigle, M.D., B.S., B.Hy., D.P.H., Medical Officer of Health, School Medical Officer, Medical Superintendent of the Isolation Hospitals, Medical Superintendent of Robson Maternity Home and Inspector of Midwives	Whole time
W. M. Ritchie, M.B., Ch.B., (Medical Practitioner), Deputy Medical Officer of Health, and Assistant Maternity and Child Welfare Medical Officer,	Part time
A. Gompertz, M.R.C.S., L.R.C.P., (Medical Practitioner), Assistant Maternity and Child Welfare Medical Officer.	Part Time
Jean Sutherland, M.B., Ch. B., D.P.H., Assistant School Medical Officer.	Whole time

Sanitary Staff.

E. G. Power, A.R.S.I., Senior Sanitary Inspector	Whole time
J. Kirby, M.R.S.I., M.I.S.E., Cert. San. Ins. Jt. Bd., Meat and Food Cert. R.S.I., San. Sc. R.S.I., Sanitary Inspector	do.
E. Varley, Cert. San. Ins. Jt. Bd., Sanitary Inspector	do.
Miss M. Jones, Cert. R.S.I., Sanitary Inspector	do.

Tuberculosis Health Visitor.

Miss J. Clacherty, General Trained, Cert. C.M.B., H.V. & School Nurse Cert. R.S.I.	do.

Health Visitors.

Mrs. C. Cameron, General Trained, Cert. C.M.B., (also acts as Assistant Inspector of Midwives)	Whole time
Miss L. Catchpole, Cert. C.M.B., H.V. and Sch. Nurse, Cert. R.S.I.	do.
Miss B. Fidler, General Trained, Cert. C.M.B.,	do.
Miss L. Jones, General Trained, Cert. C.M.B.,	do.
Miss M. Veitch, H.V. and Sch. Nurse, Cert. R.SI., Cert. C.M.B., Board of Education Diploma.	do.

School Nurses.

Miss M. Lamb, General Trained.	do.
Miss W. Ward, General Trained	do.
Miss A. Carr, General Trained, (Dental Nurse)	do.

School Dental Officer.

A. E. Pattie, L.D.S.	do.

Veterinary Inspector.

S. E. Morton, M.R.C.V.S.	Part time

Clerks.

H. Kipling, Cert. R.S.I., Chief Clerk	Whole time
W. Baker	do.
Miss J. Hall, School Medical Service	do.
Miss I. Parrish, School Medical Service	do.

Matron of Isolation Hospitals.

Miss E. Hodgson	do.

Matron of Robson Maternity Home.

Miss E. Jeffries	do.

Health Department,
11, Finkle Street,
Stockton-on-Tees,
May 2nd, 1932.

To the Town Council of the Borough of Stockton-on-Tees.

Mr. Mayor and Gentlemen,

I have the honour to submit herewith my Annual Report on the state of the Public Health in the Borough of Stockton-on-Tees for the year 1931.

Signs are beginning to manifest themselves that the continued and increasing industrial depression is having an adverse effect upon the resisting powers to disease of a large section of the community. The state of nutrition of those unfortunates who are compelled to exist on the unemployment benefit is below par. The probable effects of the reduction of the amount of this 'dole' has been offset by a reduction in the price of some articles of food ; but there is reason to fear that, if a rise in the cost of living occurs, many families will be brought below the subsistance level. In those cases in which the weekly rent amounts to nearly 40 per cent of the total income, the signs of malnutrition are most marked.

There has been a reduction in the number of families desirous of becoming tenants of Council houses. This fact does not constitute evidence that the housing shortage has been entirely met, that the people are satisfied with their present homes, or that overcrowding has been exterminated, but simply means that the number of families who can afford to pay the rent of Council houses is lower than was formerly the case. Individual families are moving from fairly satisfactory accommodation to less commodious apartments in order to save a shilling or two a week which can be used for the purchase of food.

The death-rate for 1931 is fractionally higher than in 1930. The birth-rate is lower.

The Maternity and Child Welfare Service has worked at very high pressure and the activities of this service are much appreciated by the mothers. The total attendances during the year have exceeded 21,000 and approximately 70% of all babies have attended.

The Robson Maternity Home has continued to do excellent work and has met calls upon its accommodation which, at times, have threatened to overwhelm it.

The extension of the Isolation Hospital accommodation has enabled a wider selection of cases to be admitted. The beneficial effects of this are described in the section of this report which deals with the hospital.

It is a pleasure to be able to report that the staff of the Health Department, including the institutions under the control of the Department, has worked loyally and well.

I have the honour to remain,
Your obedient servant,
G. C. M. M'GONIGLE,
Medical Officer of Health.

STATISTICS AND SOCIAL CONDITIONS OF THE AREA.

Area (in acres)—Land and Inland Water ...	5,465 statute acres.
Population—At Census 1931	67,724
Estimate of resident population by Registrar General, 1931	68,400
Number of inhabited houses (end of 1931) according to Rate Books	15.134
Rateable value of the Borough	£284,198
Sum represented by a penny rate	£1,104

Social Conditions. There has been very little change during the the year in the social conditions of the population of the Borough.

There was an increase in the number of men on the unemployment registers and although the number of persons in receipt of out-relief showed a decrease, the amount granted in benefit was considerably more than in the previous year.

The number of men in receipt of unemployment benefit and the number of persons in receipt of out-relief for each of the six years 1926-1931, are shown in the following table.

Year.	Average No. of Men on Unemployment Register.	Amount paid in benefit.	Approx. No. of Out-relief cases.	Amount paid in Out-relief.
1926	6,383	£236,453	1,711	£57,219
1927	3,462	£127,671	1,670	£66,519
1928	3,100	(not available)	1,270	£48,437
1929	2,681	do.	895	£32,543
1930	6,140	£312,000	2,400	£34,435
1931	7,600	(not available)	1,502	£50,536

The Prevention of Disease. Preventive medicine has, as its name indicates, one great object, namely the prevention of disease and premature death. The only natural cause of death is old age; all other causes may be considered as failure to withstand adverse influences acting upon the individual.

The practice of preventive medicine endeavours to remove or mitigate the adverse influences, so as to enable the normal or biological life of the individual to continue undamaged until the bodily mechanism gradually wears out with the passage of the years.

In the past preventive medicine has been concerned very largely with the environmental factors such as the removal of refuse, the provision of sewers, the distribution of pure water supplies, questions of housing and the control of certain infectious diseases. Money spent on such services has yielded large dividends in the improved health of the community. One signal triumph which may be quoted is the virtual disappearance of enteric (typhoid) fever resulting from the elimination of contaminated drinking water.

It has gradually become apparent that environmental factors do not constitute the whole of the adverse influences acting upon mankind. Heredity plays some part in the constitution of the individual, though there is a tendency in some directions to over-emphasise its importance.

One factor, the importance of which is becoming more and more obvious in the maintenance of health and physical efficiency is the nutritional state of the individual. At one time it was thought that, provided the individual consumed a sufficient quantity of fats, proteins and carbohydrates, it mattered little in what forms these three main constituents of food were present. Our modern knowledge has shown us that a diet, in order to be satisfactory, must contain many constituents in addition to the three mentioned above.

The animal body depends upon diet for many more factors than the mere energy requirements of life. It appears probable that the following conditions, among others, are dependent upon adequate physiological nutrition, and that their occurrence can be controlled by proper feeding: fertility; certain cases of premature birth and stillbirth; congenital debility; ability of the mother to breast feed her children; growth of the the child; dental decay; resistance to infection; certain eye conditions; scurvy; goitre; certain forms of anæmia; certain nervous conditions, and other abnormal states of which rickets may be given as an example.

When one or more of these conditions is present in a recognisable form appropriate treatment can be undertaken, and a cure may be affected, provided that the tissues of the body have not been irreparably damaged. In some instances an apparent cure can be brought about, but there may yet remain some tissue or part of the body permanently damaged. In this connection rickets may be taken as an example—certain bony manifestations of rickets can readily and rapidly be caused to disappear by appropriate dietetic measures—thus bow legs in young children can be straightened by this means, but there may remain some deformity of the pelvic bones which, twenty years later, may endanger the life of a woman in childbirth.

The deficiencies in the diet may be insufficient to bring about obvious manifestations of disease but may be sufficient so to lower the biological efficiency of the body that the resistance to disease falls below the safety line. This statement may be made clear to the lay mind by considering the case of a lung condition known as broncho-pneumonia. Broncho-pneumonia causes many deaths in children, but its fatality rate is in proportion to the nutritional state of the children attacked. A well nourished child does not, except in very exceptional circumstances, die of broncho-pneumonia. Fatal broncho-pneumonia is a disease of poverty, of malnutrition and of lowered reserve of strength. By adequate nourishment a child susceptible to broncho-pneumonia can have its resistance raised sufficiently to combat the disease or to resist infection of this nature entirely.

In the past the resisting power of the individual to disease has received inadequate recognition. Environmental factors on the other hand, have been given too large a share of blame for high mortality and morbidity rates.

This statement must not be taken as indicative that there should be any relaxation in our efforts to improve the environmental state of our population, but mainly constitutes a warning that the amelioration of environmental factors alone will be insufficient to bring into being a Utopian condition of good health. From every point of view our efforts towards improving the conditions of life of the community must be continued, but care should be taken to ensure that such ameliorating conditions are not obtained at the expense of other factors in the well-being of the people. It is possible to improve the housing conditions of the people, but if this is done by raising the rents to a figure which seriously depresses the food purchasing capacity of the tenants more harm than good may be done.

For four years I have closely watched the population which was moved from the Housewife Lane Unhealthy Area to Mount Pleasant and an intensive study of the vital statistics of this group of people has revealed certain disquieting tendencies which are, at present, the subject of a careful and extensive investigation. The preliminary conclusions made as a result of this work appear to be of such importance that the London School of Hygiene has, with the aid of a financial grant from the Rockefeller Foundation placed a research student (Dr. I. J. Jones, M.B., D.P.H.), at the disposal of the Health Department to investigate the scientific and social aspects of the problem. It is hoped that the results of this special investigation will be of material value in defining certain factors which, at present, exert an adverse influence upon a population living upon the border line of poverty.

The results of this investigation, together with certain recommendations, will be laid before you.

EXTRACTS FROM VITAL STATISTICS OF THE YEAR.

Live Births :—

				Rate per 1000 of population	
	No.	Males	Females	1931	1930
Legitimate	1299	686	613	18·99	22·19
Illegitimate	64	37	27	0·93	1·06
Totals	1363	723	640	19·92	23·25

Still-births :—

			Rate per 1000 Total Births.	
No.	Males	Females	1931	1930
43	23	20	30·58	39·40

Deaths :—

Total	Males	Females	Rate per 1000 of population 1931	Rate per 1000 of population 1930
856	447	409	12·51	12·49

Percentage of total deaths occurring in Public Institutions 25·7

Number of women dying in, or in consequence of child-birth :—

From Sepsis	3	Total 8
From other puerperal causes	5	

Maternal mortality rate per 1000 total births :—

	1931	1930
From Sepsis	2·13	1·23
From other puerperal causes	3·55	2·47
Total Rate	5·68	3·70

Infantile Mortality :—

	No. of Deaths 1931	No. of Deaths 1930	Rate per 1000 live Births 1931	Rate per 1000 live Births 1930
Legitimate	102	96	75	61
Illegitimate	6	6	4	4
Totals	108	102	79	65

	1931	1930
Deaths from Measles (all ages)	10	12
Deaths from Whooping Cough (all ages) ...	10	5
Deaths from Diarrhoea (under two years) ...	7	7

The following table shows the six principal causes of death during the year, compared with the figures for the previous year, and with the average for the five year period 1926-30.

	1931.	1930.	Average 1926-30.
Heart Disease ...	158	137	129
Pneumonia ...	99	84	115
Cancer	89	81	79
Tuberculosis (all forms)	68	83	85
Bronchitis	35	27	50
Congenital Debility, etc.	45	52	50
Totals ...	494	464	508

These six causes of death were responsible for 57·7% of the deaths registered in the Borough during the year.

Heart disease, together with associated diseases, was responsible for 195 deaths during the year, or 22·7% of the total deaths. Pneumonia, bronchitis, and other respiratory diseases, accounted for 152 deaths, or 17·7% of the total deaths. These two groups of diseases were responsible for 40% of the deaths during the year.

It is pleasing to note a considerable decrease in the number of deaths from tuberculosis, both respiratory and other forms. Cancer still continues to take a heavy toll of the population. There were eight more deaths from this disease during 1931 than there were in 1930.

There has been a remarkable reduction in the number of deaths from violence during the year, only 19 deaths being registered as due to this cause. Two of these were cases of suicide. Last year, violence was the cause of death in 43 cases, 10 of these being cases of suicide. This reduction may, in part, be due to the increased number of men who usually follow dangerous occupations, being unemployed.

GENERAL PROVISION OF HEALTH SERVICES IN THE AREA.

Nursing in the Home. There has been no change in the arrangements made for the home nursing of general and infectious cases, which were described in my last year's report.

The Corporation considered an application during the year from the District Nursing Association for an increase in the annual fee paid for this work and after consideration the fee was increased from £160 to £250.

Midwives. There are 21 midwives practising in the area, including four employed at the Robson Maternity Home, and one at the Durham County Council Public Assistance Hospital. With the exception of those employed at the Robson Maternity Home, no midwife is employed or subsidised by the Local Authority.

Laboratory Facilities. There has been no change in the arrangements made for the examination or analysis of clinical material, water, milk and foodstuffs.

Legislation in force. No addition to the list of Local Acts, Special Orders, Adoptive Acts, or Byelaws, relating to public health, which was given in my last year's report, was made during the year 1931.

Hospitals. There was no change during the year in the Hospital services which are used by the inhabitants of the area.

Maternity and Nursing Homes. The Nursing Homes Registration Act, 1927, is administered by the Durham County Council.

Institutional Provision for Unmarried Mothers, Illegitimate Infants and Homeless Children. There is no institutional provision of this nature in the Borough.

Ambulance Facilities. A new ambulance for non-infectious cases was purchased by the Council during the year. This comprises a Rolls Royce chassis on which has been built an ambulance body. This ambulance replaces an old Ford ambulance which was loaned to the Corporation by the St. John Ambulance Association and the British Red Cross, and is in addition to the new Austin ambulance purchased by the Council in 1930.

Clinics and Treatment Centres. No new Clinics or Treatment Centres were opened during the year.

Maternal Mortality. Inquiry is made by the Health Visitors into all maternal deaths and into cases of Puerperal Fever and Pyrexia.

Health Visiting. Five Health Visitors are employed by the Corporation on Maternity and Child Welfare work, which includes the home visiting of children between the ages of 1 and 5 years. A table showing the number of home visits paid by the

Health Visitors will be found in the section on Maternity and Child Welfare. The arrangements made for this work are adequate.

Children Act, 1908. Each of the Health Visitors is appointed an infant protection visitor in accordance with the Children Act, 1908, and visits the children registered under the Act in her district.

SANITARY CIRCUMSTANCES OF THE AREA.

Water. The Borough is supplied with water by the Tees Valley Water Board. This supply has its source in upland gathering grounds near which it is compounded in extensive reservoirs constructed about 30 miles from Stockton in the valleys of the Lune and the Balder, tributaries of the river Tees. The supply is constant, and abundant, and the quality is good.

Rivers and Streams. The crude sewage of the Borough is discharged into the river Tees without treatment. No complaint was received during the year of nuisance from this source.

Drainage and Sewerage. During the year 1931, the following work in connection with the sewers was carried out.

The sewers in Hartburn Village have been re-laid, the new sewer sizes being considered adequate to take normal storm discharges. Darlington Road has been sewered up to the Borough Boundary and the whole of Green's Lane is also drained. A main sewer in the Green's Beck Valley opens up the whole area from Oxbridge to Darlington Road for sewerage development. The first section of a new high level main trunk sewer has been laid from Hartburn Bank to Oxbridge Lane.

Closet Accommodation. The whole of the houses in the Borough within easy reach of the sewers are now provided with closets on the water carriage system. Four conversions to water closets were carried out during the year, two from privy middens and two from waste water closets.

The number of each type of convenience remaining at the end of the year was as follows:—

Houses with water closets	15,335
„ which share water closets	251
„ with midden privies	55
„ „ pan closets	34
„ „ slop closets	56
„ „ both water closets and privies ...	2
Total ...	15,733

Scavenging. The following is a copy of the Annual Report of Mr. T. P. Hardman, the Cleansing Superintendent on the work of his Department during the year ended March 31st, 1931.

COLLECTION. A weekly collection of refuse from 15,253 premises in the Borough was maintained and very few complaints of non-removal were received. 18,174 tons of refuse were collected during the year at a cost of £6,976, giving an average cost per ton of 7/8·2d.; during the previous year the costs were £6,957 and 7/9·06d. respectively.

The income received for the removal of trade refuse was £51/7/5d., as compared with £61/18/9d. during the previous year.

DISPOSAL. Controlled tipping is in force at all the tips and eight places of disposal were in use during the year. 89% of the refuse was disposed of by means of tipping and 11% by incineration.

19,550 tons of refuse were disposed of during the year at a cost of £3,696, giving an average cost per ton of 3/9·3d. as compared with £3,433 and 3/6·7d. respectively during the previous year.

In addition to the removal of refuse the Department conveyed 382 loads of clinker and 42 loads of covering material to the tips, and removed 504 loads of tins from tips to baling press.

615 loads of soil were received at the tips from various sources.

The increase in the cost of disposal is due to the reduced amount received from the sale of salvaged materials, which shows a decrease of £184/8/5d. and to the extra cost involved owing to the completion of No. 10 Tip.

Salvage. The amount received from the sale of baled scrap, light scrap and glass, during the year was £131/18/3d., as compared with the sum of £316/6/8d. received during the previous year. The market for scrap was very poor, and at the end of the year we had fifty tons of baled scrap on hand.

The following table shows the tonnage of refuse removed and the costs during the past five years :—

Year ended Mar. 31st.	Refuse collected. Tons	Cost of Collection.	Cost per Ton.	Cost of Disposal.	Cost per Ton.
1927	16589	£8,249	9/11·3d.	£3,406	4/1·4 d.
1928	16836	£7,447	8/10·1d.	£3,288	3/10 d.
1929	16864	£7,013	8/3·8 d.	£3,566	3/11·5d.
1930	17940	£6,957	7/9·06d.	£3,433	3/6·7 d.
1931	18174	£6,976	7/8·2 d.	£3,696	3/9·3 d.

The average costs per ton for the collection and disposal of refuse from all districts giving returns to the Ministry are given in the latest report as 9/2d. and 4/8d. respectively.

The number of premises from which refuse has to be collected was increased by the addition of 538, and this extra work was undertaken at an extra cost to the Department of £19 as compared with the cost of the previous year.

The types and numbers of receptacles in the Borough at the end of the year were as follows :—

Ashpans	12,910
Ashpits	2,841
Pails	38

71 ashpans were substituted for ashpits during the year.

SANITARY INSPECTION OF AREA.

(a) Number and Nature of Inspections made by the Sanitary Inspectors during the year 1931.

Districts	No. 1	No. 2	No. 3	No. 4	Totals	
Investigations made in respect to notifiable disease	...	...	...	...	542	Whole Borough
Premises disinfected after Infectious disease	...	...	...	...	246	
Premises disinfected for Vermin ...	...	...	...	...	60	
Number of re-visits where cases are isolated at home	...	...	...	...	5	
Inspections following complaints ...	67	47	95	97	306	
,, under the Housing &c Acts	23	...	46	108	177	
,, under the Public Health Acts	55	43	274	190	562	
,, of Offensive Trades ...	10	...	99	50	159	
,, of Workshops and Workplaces	5	50	...	...	55	
,, of Factories	41	...	5	1	47	
,, of Bakehouses ...	2	119	...	3	124	
,, of Cowsheds ...	102	...	12	76	190	
,, of Dairies and Milkshops	72	25	31	28	156	
,, of Stables	5	1	34	1	41	
,, of Slaughter-houses ...	1375	...	675	588	2638	
,, of Markets and Shops...	88	...	231	32	351	
,, of Common Lodging Houses	36	...	166	...	202	
,, of Ice Cream Shops ...	31	10	18	13	72	
,, of Fried Fish Shops ...	8	...	23	24	55	
,, in regard to Outstanding Notices ...	260	812	390	613	2075	
Miscellaneous Inspections ...	205	112	33	160	510	
Samples taken for Analysis ...	...	...	...	...	68	Whole Borough
,, taken for Bacteriological Examination	...	...	...	...	61	
Visits to Caravans ...	35	...	...	32	67	
,, to Houses-let-in-lodgings ...	40	...	136	...	176	
,, *re* Overcrowding	...	...	22	36	58	

(b and c) NOTICES.

	Informal	Public Health Statutory	Housing Statutory	Total
Number of Notices served	649	52	45	746
Number complied with	612	44	39*	695

* In 13 of these the work was carried out by the Corporation.

SUMMARY OF WORK DONE UNDER THE PUBLIC HEALTH ACTS.

Nature of Defects or Nuisances	Number Discovered	Informal Notices Served	Statutory Notices Served	Defects or Nuisances Remedied	Notices in Arrear at end of 1930 done in 1931.
Defective floors	52	52	8	46	7
Overcrowding	18	...	...	...	...
Dirty houses	3	3	..	3	...
Defective ventilation	51	51	2	45	8
Defective walls	73	73	12	67	7
Defective roofs	143	143	20	119	11
Defective eaves gutters	94	94	10	82	8
Defective fall pipes	45	45	1	39	2
Defective yard pavements	40	40	3	35	1
Defective plasterwork	58	58	4	49	4
Insufficient water supply	14	14	12	14	...
Offensive accumulations	3	3	...	3	...
Nuisances from animals	1	1	. .	...	...
Improper food stores	...	...	...	...	...
Miscellaneous minor defects	239	239	28	214	17
Dirty water closets	1	1	...	1	...
Insufficient water supply to W.C.'s	10	10	1	9	1
Defective soil pipes	6	6	...	3	...
Defective flush pipes	7	7	...	3	1
Defective cisterns	27	27	1	20	5
Defective W.C. pedestals	30	30	4	12	1
Defective privies	...	...	...	...	...
Defective ashpits	27	27	...	22	3
Defective pans	65	65	1	30	1
Defective or blocked drains	136	136	1	136	4
Defective sinks	1	1	...	1	...
Defective sink wastes	6	6	...	5	1
Defective cellar drainage	1	1	...	1	...

(1) Inspection of Factories, Workshops and Workplaces.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises	Inspections	Number of Written Notices	Occupiers Prosecuted
(1)	(2)	(3)	(4)
Factories (including Factory Laundries) ...	70	0	0
Workshops (including Workshop Laundries)	49	2	0
Workplaces (other than Outworkers' premises)	21	1	0
Totals ...	140*	3	0

* Most of the Slaughter-houses and Offensive Trade Premises are either Factories or Workshops. Frequent visits are paid to these premises but the inspections are not included in this figure.

(2) Defects found in Factories, Workshops and Workplaces.

Particulars	Number of Defects			Number of Offences in respect to which Prosecutions were Instituted
	Found	Remedied	Referred to H.M. Inspector	
(1)	(2)	(3)	(4)	(5)
Nuisances under the Public Health Acts:—*				
Want of cleanliness ...	4	4	0	0
Want of ventilation ..	1	1	0	0
Overcrowding	0	0	0	0
Want of drainage of floors ...	1	1	0	0
Other Nuisances	8	8	0	0
Sanitary Accommodation—				
Insufficient	0	0	0	0
Unsuitable or defective ...	2	2	0	0
Not separate for sexes ..	1	1	0	0

* Including those specified in sections 2, 3, 7 and 8 of the Factory and Workshop Act, 1901, as remediable under the the Public Health Acts.

Offences under the Factory and Workshop Acts:—				
Illegal occupation of underground bakehouse (s. 101)	0	0	0	0
Other offences ... .. (Excluding offences relating to outwork and offences under the Sections mentioned in the Schedule to the Ministry of Health (Factories and Workshops Transfer of Powers) Order, 1921).	0	0	0	0
Total ...	17	17	0	0

Smoke Abatement. One complaint of nuisance from smoke was received during the year. The owners of the factory concerned agreed to raise the height of the chimney but on examination this was found to be impracticable. A change of fuel and careful stoking has mitigated the nuisance somewhat but the matter is still under observation.

PREMISES AND OCCUPATIONS WHICH CAN BE CONTROLLED BY BYE-LAWS OR REGULATIONS.

Slaughter-houses. There are twenty-six slaughter-houses in the Borough. Five of these premises have been rebuilt on modern lines during recent years but the majority of the remainder leave much to be desired in the way of accommodation and equipment. These premises are visited regularly by the Inspectors and are kept in a satisfactory condition.

Offensive Trades. Permission was given during the year for the establishment of the trade of tripe boiler on premises in the Borough. There are now nine premises in the Borough where offensive trades have been established with the permission of the Local Authority. The trades carried on on these premises are as follows:—

Tripe Boiling only	4
Tripe Boiling and Gut Scraping ...	1
Gut Scraping only	1
Fat Boiling	1
Hide and Skin Factors	2

Common Lodging Houses. There are four common lodging houses in the Borough, providing accommodation for 139 single men. Three of these premises are old and structurally unfitted for use as common lodging houses. Regular visits are paid to these premises to see that the requirements of the byelaws are observed.

Houses-let-in-Lodgings. There are now 43 houses-let-in-lodgings on the Register. The practice of adapting large old-fashioned houses for use by several families still continues. 176 visits were paid to these premises during the year to see that the requirements of the byelaws were observed.

Tents, Vans, Sheds, etc. Byelaws were made by the Corporation in respect to tents, vans, sheds, etc., in January, 1930. Since then close observation has been kept on all caravans in the Borough and strict observance of the byelaws insisted upon, with the result that most of the vans have now left the district.

Schools. Twelve school departments were due for internal colour-washing during the year and this work was duly carried out. A more pleasing shade for the walls has been substituted and the schools are now much brighter. Periodic inspections of out-offices have been made and any defect of flushing, etc., promply dealt with.

The artificial lighting in all schools received the attention of the Gas Engineer and Manager during the year, and a general improvement was effected.

All schools are served by the water carriage system and the Tees Valley Water Board's supply is laid on.

During the year 410 children were excluded from school on the ground that this was desirable to prevent the spread of infectious disease. Of this number, 239 were actual sufferers from infectious disease of one or another kind, while 171 were contacts. No school or department was closed on account of infectious disease during the year.

HOUSING.

Number of new houses erected during the year 1931 :—

(a)	Total (including numbers given separately under (b) ...	322
(b)	By the Local Authority	178
	By other bodies or persons	Nil

HOUSING STATISTICS FOR THE YEAR, 1931.

Districts	No. 1	No. 2	No. 3	No. 4	Total
I. Inspection of Dwelling-houses during the year :—					
(1) (a) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts) ...	78	43	333	298	752
(b) Number of inspections made for the purpose	78	43	333	298	752
(2) (a) Number of dwelling-houses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925	23	—	46	108	177
(b) Number of inspections made for the purpose	23	—	46	108	177
(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	6	—	—	—	6
(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation	17	—	46	104	167
2. Remedy of Defects during the year without service of Formal Notices.					
Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority or their Officers ...	46	30	274	262	612
3. Action under Statutory Powers during the year.					
A. Proceedings under Section 17, 18 & 23 of the Housing Act, 1930.					
(1) Number of dwelling-houses in respect of which notices were served requiring repairs...	15	—	12	18	45

HOUSING STATISTICS—continued.

Districts	No. 1	No. 2	No. 3	No. 4	Total
(2) Number of dwelling-houses which were rendered fit after service of formal notices :—					
(a) by owners	12	—	8	6	26
(b) by Local Authority in default of owners ...	—	—	4	9	13
B. Proceedings under the Public Health Acts.					
(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied	13	6	23	10	52
(2) Number of dwelling-houses in which defects were remedied after service of formal notices :—					
(a) by owners	13	7	14	10	44
(b) by Local Authority in default of owners ...	—	—	—	—	—
C. Proceedings under Sections 19 and 21 of the Housing Act, 1930.					
(1) Number of dwelling-houses in respect of which Demolition Orders were made ...	6	—	—	—	6*
(2) Number of dwelling-houses demolished in pursuance of Demolition Orders ...	—	—	—	—	—
D. Proceedings under Section 20 of the Housing Act, 1930.					
(1) Number of separate tenements or underground rooms in respect of which Closing Orders were made ...	—	—	—	—	—
(2) Number of separate tenements or underground rooms in respect of which Closing Orders were determined, the tenement or room having been rendered fit .	—	—	—	—	—

HOUSING STATISTICS—continued.

Districts	No. 1	No. 2	No. 3	No. 4	Total
E. Proceedings under Section 3 of the Housing Act, 1925.					
(1) Number of dwelling-houses in respect of which notices were served requiring repairs...	—	—	—	—	—
(2) Number of dwelling-houses which were rendered fit after service of formal notices :—					
(a) By owners	—	—	—	—	—
(b) By Local Authority in default of owners ...	—	—	—	—	—
(3) Number of dwelling-houses in respect of which Closing Orders became operative in puruance of declarations by owners of intention to close...	—	—	—	—	—
F. Proceedings under Sections 11, 14 and 15 of the Housing Act, 1925.					
(1) Number of dwelling-houses in respect of which Closing Orders were made ...	—	—	—	—	—
(2) Number of dwelling-houses in respect of which Closing Orders were determined, the dwelling-houses having been rendered fit	—	—	—	—	—
(3) Number of dwelling-houses in respect of which Demolition Orders were made	—	—	—	—	—
(4) Number of dwelling-houses demolished in pursuance of Demolition Orders	—	—	—	—	—

* In five of these cases the Demolition Orders were rescinded on the Council accepting an undertaking from the owners under 19 (2) of the Housing Act, 1930, that the houses would not be used for human habitation.

INSPECTION AND SUPERVISION OF FOOD.

Milk. The value of fresh milk as a food, particularly for children, is recognised by all sections of the community but, unfortunately, its cost places it (except in minute quantities) beyond the purchasing power of many families in this town.

During the past year the staff of the Health Department has continued to give much time and energy to the supervision of the local milk supply.

The number of milkshops in the Borough at the end of 1931 was 96. During the twelve months 14 new premises were registered and 10 were taken off the register on ceasing to sell milk.

One application to be registered was refused.

There are twenty-six farms within the Borough boundary on which milk is produced for sale. The number of milch cows is approximately 400.

One farm in the Borough area possesses a herd of clinically tested cows and produces Grade A milk.

It is a pleasure to be able to record that the standard of cleanliness maintained on most of these farms is a high one and much of the milk produced shows a very low bacterial count.

The following table shows the results of the bacteriological examination of samples of milk produced within the Borough. The samples in each of the groups bracketted together were from the same cowkeeper.

No. of Sample	Presence of Bacillus Coli	Presence of Tubercle Bacilli	Sample taken from	Total Bacterial Count.	Remarks
5	Neg.	neg.	Cowkeeper	8,100	
6	Pos. in 1·0 c.c.	neg.	,,	30,000	
51	Pos. in 0·0001 c.c.	neg.	,,	243,000	
58	Pos. in 1·0 c.c.	neg.	,,	13,100	

7	Neg.	neg.	,,	9,600	
8	Neg.	neg.	,,	22,100	
16	Neg.	neg.	,,	4,400	
10	Pos. in 1·0 c.c.	T.B. found	,,	33,400	
21		neg.	,,		
64	Neg.	neg.	,,	4,700	
11	Neg.	neg.	,,	3,300	
12	Neg.	neg.	,,	5,400	
67	Pos. in 0·1 c.c.	neg.	,,	21,100	
13	Neg.	neg.	,,	10,000	
15	Neg.	neg.	,,	6,000	No. 46 taken from suspect'd cow
46		neg.			
59	Neg.	neg.	,,	6,500	
17	Pos. in 0·1 c.c.	neg.	,,	65,800	
28	Pos. in 1·0 c.c.	neg.	,,	10,400	
29	Neg.	neg.	,,	4,200	
30	Pos. in 1·0 c.c.	T.B. found	,,	14,500	
42		neg.	,,		Taken as a result of T.B. found in Sample No. 30
43		neg.	,,		
44		neg.	,,		
45		neg.	,,		
57	Pos. in 1·0 c.c.	neg.	,,	65,000	
50	Neg.	neg.	,,	3,600	
52	Pos. in 0·0001 c.c.	neg.	Retailer	96,700	
60	Pos. in 0·1 c.c.	neg.	,,	47,900	
65	Neg.	neg.	Cowkeeper	13,000	
66	Neg.	neg.	,,	4,600	

The cowkeepers are, on the whole, to be congratulated on these results.

Cowbyres. The following improvements were carried out during the year:—

NORTHCOTE FARM, NORTON.—New floors laid. New standings, partitions. drainage and windows. The town water supply has been laid on.

STATION FARM, NORTON.—A new byre has been built.

CROOKS BARN FARM, NORTON.—New windows have been provided to the byres.

ASHTREE FARM.—New floors laid.

The County of Durham Veterinary Inspector has reported, after his bi-annual inspection of the cowbyres, that the high standard of cleanliness maintained is a credit to the cowkeepers.

The results of bacteriological examination of samples of milk are communicated to the cowkeepers. These results are an incentive to greater effort on the part of those handling the cows to produce clean milk. By means of a small portable filter, milkers can be shown the quantity of dirt visible to the naked eye, in a sample of milk. It is found that this practical demonstration is very effective and a spirit of competition is aroused among the workers in a cowbyre as to who can produce the cleanest milk.

Tuberculosis and Milk Supply. The routine inspection of dairy cattle is carried out by the veterinary staff of the Durham County Council. The number of cows in the Borough is approximately 400 and 2 were found on inspection to be affected with tuberculosis, but in one of these the diagonisis was not confirmed.

Cattle found to be tuberculous by the County Veterinary Officers are dealt with under the Tuberculosis Order which is administered by the Town Council. In all cases the carcase is destroyed by incineration, no part being allowed to be sold for food.

In addition to those cattle reported as tuberculous by the County Officers, notification of suspected tuberculosis in cattle was received from farmers in 5 instances. In these cases the Borough Veterinary Surgeon, Mr. S. Morton, examines the suspected animals and, in addition all bovine animals on the premises. As result of Mr. Morton's inspections. an additional 4 cows were certified as tuberculous and were slaughtered.

As a further safeguard samples of milk are sent to the Bacteriological Department of the College of Medicine at Newcastle for examination for the presence of tubercle bacilli. Unfortunately it is not possible, with absolute certainty, to determine whether tubercle bacilli are present or absent by mere microscopical examination of the deposit obtained by centrifuging samples of milk. In order to obtain definitely certain results biological tests are undertaken. These tests are carried out by injecting small quantities of the milk into guinea pigs. If tubercle bacilli are present the guinea pigs develop tuberculosis. The unsatisfactory feature of this test is the length of time which elapses before a result can be obtained. This interval may be as much as six weeks. In this period of time a cow excreting tubercle bacilli in milk may do much harm.

Considering the risks to the health of the community which are involved by this rather cumbersome method of examination, it appears to me to be desirable to be satisfied with a less meticulous test. The microscopical examination of the deposit obtained by centrifuging a a sample of milk from individual cows will often give information on which it is possible to take action. This method of examination can be carried out in as many hours as weeks are required for a biological test. The findings can be confirmed by a biological test, but in the meantime the cow can have been slaughtered. The added cost of an occasional mistake would be a trifle compared to the possible damage which might have been done to the populace.

The Grading of Milk. In order to reduce the dangers to health due to dirty and, possibly, tubercle infected milk, certain official gradings of milk are in force and the public is encouraged to use graded milk.

Unfortunately graded milk is dearer than ungraded milk and the extra cost is prohibitive to many people.

The various grades of milk are :—

1. "CERTIFIED." Tuberculin tested cows. Milk must be bottled on farm immediately. Must not contain more than 30,000 bacteria per c.c· and no coliform bacillus in 1/10th of a c.c.

2. "GRADE A (TUBERCULIN TESTED.)" Tuberculin tested cows. Must not contain more 200,000 bacteria per c.c. and no coliform bacillus in 1/100th of a c.c.

3. "GRADE A PASTEURISED." Conditions similar to Grade A and Pasteurised. Must not contain more than 30,000 bacteria per c.c. and no coliform bacillus in 1/10th of a c.c.

4. "GRADE A." Cows must be examined every three months. Milk need not be bottled by producer but may be sent to bottling establishment in bulk in sealed container. Must not contain more than 200,000 bacteria per c.c. and no coliform bacillus in 1/100th of a c.c.

5. "PASTEURISED" Milk must be retained at a temperature of not less than 145° and not more than 150° F. for at least half an hour and be immediately cooled to not more than 55° F. Must not contain more than 100,000 bacteria per c.c.

Untreated fresh milk is not graded.

The general public is unable to differentiate between these various grades of milk and much confusion exists in the minds of of the populace as to the relative merits of the various grades.

The permitted bacterial count in Grade A (Tuberculin Tested), in Grade A, and in Pasteurised milk is too high. Reference to the table giving the results of the bacteriological examination of samples of milk, which appears on page 27, shows that Stockton farmers are capable of producing milk which contains many less organisms than are permitted in Graded milk.

It is a difficult and costly mattter to build up a herd of cows which are entirely free from tuberculosis. It is estimated that at least 40% of all dairy cows react to the tuberculin test, but this does not mean that any considerable proportion of them excrete tubercle bacilli in the milk.

At the moment, and probably for many years to come, the elimination of all cows which react to the tuberculin test is impossible, but it is possible and reasonably inexpensive, to examine milch cows at frequent intervals and to exclude from a herd all animals showing any udder trouble. Also it is not an expensive matter to have frequent bacteriological examinations of milk carried out. These measures, if vigorously carried out, would reduce very greatly the risk of human beings contracting tuberculosis from bovine sources.

It appears to be desirable to reduce the grading of milk to **(1) Grade A (Tuberculin Tested).** This milk would be obtained from tubercle free herds and should not contain more than say, 30,000 micro-organisms per cubic centimetre. This would be equivalent to the present grade of Certified milk. **(2) Grade A.** Compulsory testing by the tuberculin test not required but frequent clinical examination of the cows should be carried out and also regular bacteriological examination of the milk for tubercle bacilli. The total bacterial count need not exceed 50,000 per cubic centimetre.

Pasteurised Milk. This consists of milk treated by heat so as to reduce the number of micro-organisms contained in it. The advantages of pasteurised milk are that, if properly carried out, the heating destroys tubercle bacilli and non-spore forming organisms. These are very real advantages but, like most good things, there is another side to the problem.

The disadvantages are several. The spores of certain organisms are not destroyed by the process of pasteurisation and these spores develop into micro-organisms which, under favourable conditions, may multiply rapidly.

The campaign against tuberculosis in cattle receives a check by the pasteurisation of milk, for the incentive to maintain a herd of tubercle free cattle is lost. The efforts which are being made by Local Authorities to encourage the production of naturally clean milk would lose much weight if pasteurisation became general, as milk producers would think it unnecessary to take special precautions to ensure cleanliness if they knew that their milk was to be pasteurised.

The heating of milk reduces the efficiency of Vitamin C in it and there is a danger of scurvy being caused in young infants by a shortage of this accessory food factor.

Sterilised Milk. Certain traders have taken advantage of the confusion existing in the public mind on the various designations of graded milk, and have put on the market sterilised milk under various trade names.

Sterilised milk is treated in various ways but the essential point is that it is brought to the boiling point. This milk, put up in sealed bottles, will keep without souring for many days or even weeks. It is not fresh milk.

The nutritional value of sterilised milk is much inferior to untreated or even pasteurised milk.

Not only is the vitamin content of the milk seriously reduced by this method of treating it, but the milk itself suffers in that its constituents, minerals and organic, are altered. Milk in this form does not possess the nutritional properties of untreated milk. Its growth promoting properties are interfered with and the public is not obtaining what it thinks it is purchasing.

Drastic control of this altered milk is needed in the interests of the public health.

The Milk (Special Designations) Order, 1923. Three licences, two dealers' licences to sell "Certified" milk, and one pasteuriser's licence to sell milk as "Pasteurised," were granted for the year 1931. One farmer in the Borough is licensed by the Durham County Council as a producer of Grade A milk.

29 samples of "Pasteurised" milk were taken during the year and submitted for bacteriological examination. The results of these examinations are given in the following table:—

Samples of Pasteurised Milk.

No of Sample	Presence of Bacillus Coli.	Total Bacterial Count.
1	Pos. in 0·1 c.c.	14,000
2	Negative	17,600
3	Pos. in 0·001 c.c.	47,000
9	Pos. in 1·0 c.c	189,000
14	Negative	97,000
19	Pos. in 1·0 c.c.	21,600
20	Pos. in 1·0 c.c.	24,000
22	Negative	5,000
23	Negative	40,900
24	Pos. in 0·1 c.c	17,000
25	Pos. in 0·1 c.c.	73,800
26	Pos. in 0·1 c.c.	62,000
27	Pos. in 1·0 c.c.	11,100
31	Pos. in 0·1 c.c.	1,200
32	Pos. in 0·01 c.c.	10,000
33	Pos. in 0·01 c.c.	35,600
39	Pos. in 0·0001 c.c.	61,100
40	Pos. in 0·001 c.c.	7,600
41	Pos. in 0·001 c.c.	7,900
47	Pos. in 0·001 c.c.	42,500
48	Not given	23,700
49	Pos. in 0·00001 c.c.	1,728,000
53	Pos. in 0·1 c.c.	47,500
54	Pos. in 0·001 c.c.	235,000
55	Pos. in 1·0 c.c.	12,000
56	Pos. in 0·1 c.c.	18,600
61	Pos. in 1·0 c.c.	46,500
68	Pos. in 0·01 c.c.	15,800
69	Pos. in 0·1 c.c.	9,500

Tuberculosis Order, 1925. During the year 1931, nine cows were reported to be suffering from tuberculosis. Of these, six were reported to be suffering from chronic cough and showing clinical signs of tuberculosis, one from a tubercular udder, and two from tuberculous emaciation.

On examination, seven of these cows were certified to be suffering from tuberculosis and were ordered to be slaughtered. The post-mortem results showed two to be affected with tuberculosis of the udder and five to be affected with other forms of tuberculosis, four cases being advanced and one not advanced.

The figures for 1931, compared with those of the four preceding years are given below :—

	1931.	1930.	1929.	1928.	1927.
Cases reported	9	8	12	6	17
Numbered slaughtered ...	7	6	8	4	10
Post-mortem results—					
Tuberculosis of the udder	2	2	3	2	5
Tuberculosis advanced	4	—	—	2	4
Tuberculosis not advanced	1	4	4	—	1
Not Tuberculosis ...	—	—	1	—	—

Meat Inspection. During the year 1931, 2638 visits were paid to slaughter-houses in connection with the inspection of meat under the Public Health (Meat) Regulations, 1924, and 18,326 carcases were examined. The number of animals killed during the year was practically the same as the number for last year,

The requirements of the Regulations have been fairly well carried out by the butchers during the year.

The following table shows the work done under the Regulations during the year and the meat condemned as unfit for food.

Table showing the number of animals killed and inspected and the percentage inspected during the year 1931.

Animals	Number Killed	Number Inspected	Percentage Inspected
Cattle ...	4036	3437	85
Sheep ...	11158	8907	80
Pigs ...	6604	5777	87
Calves ...	282	205	72
Total	22080	18326	83

Table showing the Meat condemned by Inspectors during the year, the total number of animals involved and the percentage to the total number of animals killed.

Animals		Carcase and Organs	Part Carcase	Organs	Number of Animals Involved	Percentage to Total Number Killed
Cattle	...	7	11	150	116	2·87
Sheep	...	1	—	18	19	0·17
Pigs	...	1	64	25	67	1·01
Calves	...	—	—	1	1	0·35
Total	...	9	75	194	203	0·92

Table showing the Meat condemned **for Tuberculosis**, the number of animals involved and the percentage to the total number of animals killed.

Animals		Carcase and Organs	Part Carcase	Organs	Number of Animals Involved	Percentage to Total Number Killed
Cattle	...	7	11	130	96	2·37
Sheep	...	—	—	—	—	—
Pigs	...	1	63	24	65	0·98
Calves	...	—	—	1	1	0·35
Total	...	8	74	155	162	0·73

Inspection of Shops, Stalls, and Places where food is prepared. During the year regular inspections were made of the foods exposed for sale on the stalls and in the markets and periodical visits were paid to all premises where foodstuffs are manufactured, prepared, stored, or deposited for the purpose of sale. All the premises were kept in a satisfactory condition and the bakehouses were limewashed at regular intervals. One inspector is on duty in the market on each market day.

The number of visits paid to these premises is shown below:—

Markets and Shops ...	351
Slaughter-houses ...	2638
Offensive Trades ...	159
Fried Fish Shops ...	55
Bakehouses ...	124
Dairies and Milkshops ...	156
Ice Cream Shops ...	72
	3555

Other foods. During the year the undermentioned foodstuffs, which were submitted for examination, were condemned as unfit for food, and were destroyed.

374 lbs. Frozen Beef.
127 lbs. Chilled Beef.
357 lbs. Fish.
50 lbs. Rabbits.
42 lbs. Tinned Beef.
25 bags Kidney Beans.
33 lbs. Tomatoes.
448 lbs. Pears.
476 lbs. Peas.
33 Bananas.

Action taken under the Food and Drugs (Adulteration) Act, 1928. During the year 1931, 68 samples were taken under the provisions of the above Act and submitted to the Public Analyst for analysis.

The number was made up as follows:—

New Milk	37
Butter	4
Pepper	3
Beef Sausage	3
Cream of Tartar	3
Bacon	2

Licorice Powder	2
Margarine	1
Glycerine and Ipecac.	1
Gravy Salt	1
Soup	1
Piccalilli	1
Glycerine	1
Syrup of Figs	1
Polony	1
Castor Oil	1
Salmon Paste	1
Turkey and Tongue Paste	1
Epsom Salt	1
Influenza Powder	1
Magnesia	1

All the samples, other than milk, were certified to be of genuine quality.

Of the 37 samples of new milk analysed, 14 were found to be below standard. The results of the analysis of these were as follows :—

No.	Results of Analysis	Remarks
1	Non-fatty solids 7·79% Fat 3·10%	Equivalent to 8·40% added water.
2	Non-fatty solids 8·40% Fat 3·70%	Slight deficiency in non-fatty solids.
3	Non-fatty solids 7·99% Fat 3·25%	Equivalent to 6% added water.
19	Non-fatty solids 8·75% Fat 2·43%	Slight fat deficiency.
20	Non-fatty solids 8·83% Fat 2·52%	Slight fat deficiency.
21	Non-fatty solids 8·94% Fat 2·95%	Slight fat deficiency.

22	Non-fatty solids	8·72%	Slight fat deficiency.
	Fat	2·95%	
25	Non-fatty solids	8·81%	Slight fat deficiency.
	Fat	2·90%	
26	Non-fatty solids	8·68%	Slight fat deficiency.
	Fat	2·75%	
28	Non-fatty solids	8·78%	Slight fat deficiency.
	Fat	2·80%	
40	Non-fatty solids	8·86%	Slight fat deficiency.
	Fat	2·95%	
41	Non-fatty solids	8·56%	Slight fat deficiency.
	Fat	2·95%	
42	Non-fatty solids	8·37%	Slight deficiency in non-fatty solids.
	Fat	3·65%	
56	Non-fatty solids	8·18%	Equivalent to 3·80% added water and 11% extracted fat.
	Fat	2·57%	

Sample No. 1 was purchased from a retail vendor and two days later sample No. 3 was taken from the person supplying him. As this milk was produced outside the Borough, the Local Authority concerned was communicated with, with a view to further action being taken by them. The local vendor was warned.

Samples Nos. 19, 20 and 21, and Nos. 25, 26 and 28, were taken from a local cowkeeper. The first three were taken in the course of delivery to his customers and the other three were taken at the farm immediately after milking. It subsequently appeared that the slight deficiency in fat was the result of insufficient mixing.

In the case of Sample No. 56, which was deficient in both non-fatty solids and fat, proceedings were taken in January of the present year and the vendor was ordered to pay the costs.

Chemical and Bacteriological Examination of Food. The chemical analysis of samples is carried out by the Public Analyst for the County of Durham, at Darlington, while the bacteriological examination of samples is carried out at the Public Health Laboratory of the University of Durham College of Medicine, Newcastle-upon-Tyne.

PREVALENCE OF, AND CONTROL OVER, INFECTIOUS AND OTHER DISEASES.

The year under review has been favourable as regards the prevalence of infectious diseases.

Scarlet Fever. The total number of notified cases of scarlet fever amounted to 118, which is 16 more than in the previous year, and there was one death. The general type of disease was mild. At no time during the year did scarlet fever assume epidemic proportions. The monthly distribution of notified cases was fairly level and the distribution in the wards of the town was diffuse.

Diphtheria. A total of 13 cases of diphtheria in the twelve months compares very favourably with 37 in the previous year. There was one death from this disease. It is satisfactory to note that in the majority of cases admission to hospital takes place in the early stages of the disease. Anti-toxin is available on demand by practitioners at any time during the day or night but owing to the fact that cases are admitted to hospital early, comparatively little use has been made of these facilities.

Pneumonia. As in previous years the most important notifiable disease was pneumonia. Notifications of 111 cases were received, compared with 129 in the previous year. The deaths during the year from this disease amounted to 106*, compared with 84 in the previous year. It appears probable that the notification of pneumonia is incomplete. In another section of this report reference is made to the practice of admitting cases of pneumonia to the Isolation Hospital. Probably it will be possible to extend this practice in the coming winter.

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* The Registrar General gives 99 as the number of deaths from this disease.

Chicken Pox. Owing to the fact that the town and the neighbouring areas have been practically free from smallpox for some time, the compulsory notification of chicken-pox was not renewed in November, 1931. The compulsory notification of chicken-pox is a very valuable safeguard against the non-recognition of cases of small-pox. If small-pox again occurs in the district application will be made to have chicken-pox made compulsorily notifiable.

Influenza. Twenty-eight deaths occurred from this disease during the year, compared with nine in the previous year. This is a considerable increase but remains below the average for the past five years.

Tuberculosis. It is gratifying to be able to report a decrease in the number of deaths from respiratory tuberculosis. In 1930 the number of deaths was 61, while in 1931 only 48 deaths occurred from this disease.

Cancer. The deaths from this disease show a slight increase on last year's figure. This increase is entirely among women, the number of deaths among men being two less than in the previous year.

Further notes on infectious diseases will be found in the section of the report dealing with the Isolation Hospital.

Disinfection. There is a disinfecting apparatus at the Isolation Hospital where all bedding, clothing, etc., removed from infected premises is disinfected by superheated steam. There is also a Thresh Portable Steam Disinfector at the Small-pox Hospital.

On the removal of a patient suffering from infectious disease to hospital, or after the recovery or death of a patient nursed at home, the infected bedding, clothing, etc., is removed for disinfection and the infected premises are sprayed with formalin spray under the supervision of a Sanitary Inspector.

246 premises were disinfected during the year. Disinfectants are provided free for home use.

60 premises which had become infested with vermin were sprayed with a special fluid.

There are no facilities in the area for the cleansing and disinfection of verminous persons and their belongings.

Bacteriological Examination. In accordance with arrangements made by the Durham County Council with the University of Durham College of Medicine, medical practitionerscan have the following bacteriological work done free of cost.

1. Examination of sputum for tubercle bacilli.
2. Examination of swabs for diphtheria bacilli.
3. Examination of blood specimens for possible reaction to typhoid and paratyphoid.

The number of specimens sent from the Borough of Stockton-on-Tees during the year 1931, and the results of the examinations, is shown in the following table.

Disease Suspected	No. of Specimens Submitted	Number Positive	Number Negative	Indefinite
Diphtheria ...	45	—	42	3
Tuberculosis ...	162	25	136	1
Enteric Fever ...	13	—	12	1
Totals ...	220	25	190	5

The Medical Officer is authorised to submit specimens from patients in the Isolation Hospital for bacteriological examination. During the year 1931, the following were submitted.

Diphtheria swabs 76; Positive 16; Negative 44; Indefinite 16.

Vaginal swab	1
Swab of ear discharge ...	1
Specimens of fæces	14
Specimens of urine	8
Blood tests for enteric fevers ...	3
Specimen of cerebro-spinal fluid	1
Total ...	28

NOTIFIABLE DISEASES DURING THE YEAR 1931.

DISEASE	AGE PERIODS													Cases Admitted to Hospital	DEATHS												
	Under 1 year	1 to 2	2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 to 20	20 to 35	35 to 45	45 to 65	65 and over	TOTAL		Under 1 year	1 to 2	2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 to 20	20 to 35	35 to 45	45 to 65	65 and over	TOTAL
SMALL-POX	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
SCARLET FEVER	2	1	3	7	6	53	23	11	10	2	...	...	118	112	1	...	...	...	...	...	...	...	...	...	...	...	1
DIPHTHERIA	1	...	...	1	1	3	4	1	1	...	1	...	13	13	...	...	...	...	...	...	1	...	...	...	...	...	1
ENTERIC FEVER ... ... (including Paratyphoid)	1	...	...	...	...	1	...	...	...	1	...	...	3	3	...	...	...	...	...	...	...	...	...	...	1	...	1
PUERPERAL FEVER	...	...	...	...	...	...	...	1	1	...	...	...	2	2	...	...	...	...	...	...	...	1	1	...	...	...	2
PUERPERAL PYREXIA ...	...	...	...	...	...	...	...	...	10	...	...	...	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...
PNEUMONIA	8	18	6	2	3	18	8	10	16	3	11	8	111	19*	19	29	7	4	1	2	3	4	4	2	9	22	106
ERYSIPELAS	1	...	...	...	1	...	1	1	4	2	12	5	27	15	...	...	...	...	...	...	...	...	...	...	1	...	1
ENCEPHALITIS LETHARGICA...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	1	...	2
CEREBRO-SPINAL MENINGITIS	...	1	...	1	...	...	...	1	2	...	1	...	6	5	...	...	1	...	...	1	...	...	1	...	...	...	3
MALARIA	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
CHICKEN-POX	7	16	12	14	15	133	21	...	4	2	...	...	224	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTALS	20	36	21	25	27	208	57	25	48	11	25	13	516	169†	20	29	8	5	1	3	4	5	6	2	12	22	117

* 25 cases of measles and pneumonia were also admitted to hospital.

† See table on page for total admissions to hospital.

OPHTHALMIA NEONATORUM.

Particulars of the seven cases of Ophthalmia Neonatorum notified during the year 1931, are given below.

Number	Date of Notification.	Cases Treated		Vision un-impaired	Vision impaired	Total Blindness	Deaths
		At Home	In Hospital				
	1931						
1	Jan. 14	Yes	...	Yes	...	...	...
2	Mar. 5	,,	...	,,	..	...	...
3	Mar. 14	,,	...	,,	..	...	...
4	Mar. 19	,,	...	,,	...	...	...
5	May 11	,,	...	,,	...	...	...
6	Jun. 10	,,	...	,,	...	...	..
7	Sep. 24	,,	...	,,	...	...	...

All the above cases were visited and treated by nurses employed by the Stockton and Thornaby District Nursing Association. The total number of visits paid being 259.

TUBERCULOSIS.

The following table shows the number of new cases notified or coming to the notice of the Medical Officer of Health, and the number of deaths from the disease, during the year 1931.

Age Periods	New Cases					Deaths				
	Pulmonary		Non Pulmonary		Total	Pulmonary		Non Pulmonary		Total
	M	F	M	F		M	F	M	F	
0-1	...	...	...	1	1	...	1	1	3	5
1-5	2	1	5	6	14	...	...	3	2	5
5-10	2	1	11	10	24	...	...	1	2	3
10-15	...	3	2	5	10	...	...	...	...	...
15-20	5	7	5	3	20	1	5	2	1	9
20-25	5	6	1	...	12	2	2	...	...	4
25-35	16	4	...	2	22	4	4	2	...	10
35-45	12	6	...	1	19	8	3	...	...	11
45-55	6	3	2	1	12	12	1	1	1	15
55-65	1	...	...	...	1	2	...	...	...	2
65 & upwards	1	1	...	...	2	...	1	...	...	1
Totals	50	32	26	29	137	29	17	10	9	65*

* The number of deaths shown here is three less than that shown by the Registrar General in his return of deaths for the Borough. This is probably accounted for by the fact that he receives more complete information in regard to certain deaths.

There was an increase of 26 in the number of new cases of Tuberculosis notified or coming to the notice of of the Medical Officer of Health during the year. This increase was made up of nine pulmonary and seventeen non-pulmonary cases. The number of deaths from the disease, however, shows a decrease from 83 to 68, the pulmonary deaths showing a decrease of 13 and the non-pulmonary a decrease of 2 on last year's figures.

The death-rate from the disease is 0·99 per 1000 of population, compared with 1·23 per 1000, the rate for the year 1930.

The following table shows the number of cases of all forms of tuberculosis notified and the case-rate per 1,000 of population, and also the number of deaths and the death-rate per 1.000 of population, from all forms of tuberculosis, for the six years 1926-31.

		New Cases.		Deaths.	
Year.		Number.	Rate.	Number	Rate.
1926	...	144	2·11	92	1·34
1927	...	150	2·20	85	1·22
1928	...	118	1·75	84	1·25
1929	...	108	1·60	77	1·14
1930	...	111	1·65	83	1·23
1931	...	137	2·00	68	0·99

The ratio of non-notified tuberculosis deaths, i.e., cases not notified before death, to the total deaths from the disease, was 1 to 5·9. This is an improvement on last year's ratio which was 1 to 3·9. The number of deaths coming under this head was 11, six of which were cases of tubercular meningitis where death occurred almost immediately.

No action was taken during the year under the Public Health (Prevention of Tuberculosis) Regulations, 1925, or the Public Health Act, 1925, Section 62.

ISOLATION HOSPITALS.

During the year under review, 229 patients from the Borough were admitted to the Isolation Hospital, as compared with 143, the number for the previous year. As stated in my annual report for last year the extensions to the Isolation Hospital have made it possible to admit a greater variety of diseases than was formerly the case. 150 of the cases admitted from the Borough during the year were cases of notifiable infectious disease, 44 were cases of pneumonia or measles and pneumonia, 4 were cases of whooping cough, and 31 were cases of non-infectious disease.

No cases of Small-pox were notified during the year.

The Corporation has agreements with the Billingham Urban District Council, and the Stockton Rural District Council, whereby cases from the areas of these Authorities are admitted to the Corporation Isolation Hospitals.

The following table shows the number of admissions to the to the Isolation Hospital from the different districts catered for during the year 1931.

Disease	Total	Borough of Stockton	Urban District of Billingham	Rural District of Stockton
Scarlet Fever	149	112	27	9
Diphtheria	24	13	9	2
Enteric Fever	3	3	—	—
Cerebro Spinal Meningitis	6	5	1	—
Measles & Broncho-pneumonia	25	25	—	—
Marasmus	26	26	—	—
Erysipelas	15	15	—	—
Whooping Cough ...	5	4	1	—
Pemphigus	1	—	1	—
Meningitis	2	2	—	—
Puerperal Sepsis ...	2	2	—	—
Puerperal Pyrexia ...	1	—	1	—
Pneumonia (broncho & lobar)	19	19	—	—
Rickets	3	3	—	—
Totals	283	229	40	11

Further information with regard to the Isolation Hospitals is given below :—

Disease	No of Cases remaining Dec. 31st, 1930	No. of Cases admitted 1931 *	No. of Cases under Treatment 1931	No. of Cases Dis-charged 1931	No. of Deaths	Per-centage Mortality †	No. of Cases remaining Dec. 31st 1931
Scarlet Fever	7	149 (136)	156	133	1	0·72 (0·64)	22
Diphtheria	7	24 (15)	31	22	2	13·3 (6·45)	7
Enteric Fever	—	3 (1)	3	2	1	— (33·3)	—
Measles and Broncho-Pneumonia	1	25	26	16	6	24	4
Marasmus	—	26	26	21	1	3·84	4
Erysipelas	1	15	16	15	1	6.6	—
Whooping Cough	—	5	5	5	—	—	—
Pemphigus	—	1	1	1	—	—	—
Meningitis	—	2	2	—	2	100	—
Cerebro-Spinal Meningitis	1	6 (4)	7	1	6 (4)	80	—
Puerperal Sepsis	—	2 (& 2 babies)	2 (& 2 babies)	1 (& 2 babies)	1	50	—
Puerperal Pyrexia	—	1	1	1	—	—	1
Broncho-Pneumonia	—	19	19	14	4	21·05	—
Rickets	—	3	3	3	—	—	—
Total	17	283	300	237	25	8·3	38

* The figures in brackets show the number of cases in which the diagnosis was confirmed.

† The Mortality rate is based on cases in which the diagnosis was confirmed. The figures in brackets show the rates based on all cases notified.

DAILY NUMBER OF PATIENTS IN HOSPITAL.

Maximum number of Scarlet Fever patients	28 (Nov. 5th)
Minimum ,, ,, ,,	5 (July 10th-13th)
Average ,, ,, ,,	14·2
Maximum number of Diphtheria patients	7
Minimum ,, ,, ,,	—
Average ,, ,, ,,	2·11
Maximum number of all patients in Hospital	43
Minimum ,, ,, ,,	15
Average ,, ,, ,,	24·25

Notes on Scarlet Fever Cases. In 13 cases admitted to Hospital as Scarlet Fever, the diagnosis was revised as follows.

Tonsillitis	1	Erythema	7	Urticaria	2
Icthyosis	1	Varicella	1	Measles	1

One patient died after 17 days in Hospital, the cause of death being (1) Lobar Pneumonia, (2) Scarlet Fever.

The total number of actual cases admitted was 136 and the complication statistics are based on this figure.

Maximum number of days in Hospital				85
Minimum	,,	,,	(excluding death)	20
Average	,,	,,		37·4

COMPLICATIONS ON ADMISSION.

Otorrhoea	4 (2·92%)	Adenitis ...	6 (4·4%)
Rhinitis	9 (6·61%)	Heart complications (Mitral systolic murmur)	6 (4·4%)

COMPLICATIONS AFTER ADMISSION.

Otorrhoea	10 (7·34%)	Nephritis ...	1 (0·72%)
Rhinitis	7 (5·14%)	Heart Complications	2 (1·44%)
Adenitis	22 (16·17%)	Arthritis ...	17 (12·5 %)
Tonsilitis	5 (3·67%)	Mastoid disease	2 (1·44%)

The heart complications consisted of one irregular action and one endocarditis. The latter patient was admitted in November and was still in Hospital in February, 1932.

One patient had mastoidectomy done in Hospital and was later removed to the General Hospital for a second mastoidectomy. The other mastoid patient was removed to the General Hospital for operation. Both patients made a good recovery.

One patient developed measles after six days in Hospital.

The fatal case developed lobar pneumonia on the 9th day and died on the 17th day.

Two patients had suppurating submaxillary glands which were incised.

Two patients were admitted from the General Hospital with Empyema.

One patient was admitted from the General Hospital with Lobar Pneumonia.

One patient was admitted from the General Hospital with scalds on arms and legs.

There were three " Return cases."

Notes on Diphtheria Cases. In 9 cases admitted to Hospital as diphtheria, the diagnosis was revised, as follows:—

Tonsillitis 8.	Dysentery 1.

The total number of actual cases admitted was 15 and the complication statistics are based on this figure.

Maximum number of days in Hospital			88
Minimum	,,	(excluding death)	27
Average	,,		40·61

COMPLICATIONS ON ADMISSION.

Adenitis	1

COMPLICATIONS AFTER ADMISSION.

Adenitis ...	1 (6·6%)	Irregular cardiac action ...	2 (13·3%).
Bradycardia	6 (40%)		

Antitoxin was given to 24 cases on admission, the total number of units used being 246,000.

Maximum dose	20,000	units.
Minimum ,, ...	6,000	,,
Average ,, ...	10,250	,,

The two fatal cases were admitted on the third day of the disease and died after being in hospital 2 and 13 days respectively.

Notes on Enteric Fever Cases. Three cases were admitted as enteric fever but in two the diagnosis was amended.

The revision in one case was enteritis. In the other case the diagnosis was revised to malignant growth. This patient died after being in hospital three days.

The only actual case was in hospital 52 days and had no complications. It was a case of paratyphoid B.

Notes on Erysipelas Cases. The fatal case of this disease was discharged from hospital on March 25th, and was re-admitted on April 6th, with a second attack. He died after being in hospital 11 days.

In one case, admitted from the General Hospital, the diagnosis was revised to septic wounds.

The other cases had no complications.

Notes on Cerebro-Spinal Meningitis Cases. In two of these cases the diagnosis was revised to intra-cranial inflammation 1, and cerebral abscess 1.

The fatal cases were in hospital 22, 3, 40, 14 days, 15 hours, and 18 hours.

The case which recovered was in Hospital 41 days.

Anti-meningococcus serum was given to three cases.

Notes on deaths from Measles.

(1.) Measles and Broncho Pneumonia. Aged 18 months. Admitted on 10th day of disease. Died 36 hours after admission. Case hopeless from admission.

(2.) Measles and Broncho Pneumonia. Aged 8 months. Admitted on third day of disease. On admission the child was very seriously ill, the respirations were at the rate of 52 per minute and the pulse was very weak and rapid. Died on the fourth day after admission.

(3.) Measles and Broncho Pneumonia. Aged 1 year 8 months. Amitted on eighth day of disease in a very serious condition. Respirations were 80 per minute and pulse very weak. Died on the third day after admission.

(4.) Measles and Marasmus. Aged 11 months. Weight on admission 9lbs. 6ozs. The child was very wasted and weak, and had been ill for a fortnight with vomiting. The day before admission developed measles. In its debilitated condition the child was quite unable to resist the added infection of measles and died on the third day after admission.

(5.) Measles and Marasmus. (This case and Number 4 were twins). Aged 11 months. The weight of this child was 9lbs. 6ozs. on admission. The history and condition of the child were similar to those of Number 4. This case died two days after admission.

(6.) Hæmorrhagic Measles. Aged 1 year and 6 months. Admitted on the fifth day of the disease. On admission the child appeared to be moribund, and died two days later. At the age of 1 year and 1 month this child was admitted to the Isolation Hospital for treatment for marasmus. The weight on admission was 14lbs. 8ozs. During the five weeks the child was in hospital the weight increased to 17lbs. 7ozs. In the interval between the child's discharge and re-admission the general condition had much deteriorated.

The nutritional condition of cases Nos. 4, 5 and 6, was such that there was no possibility of them making a successful fight against an acute infection such as measles. In none of these three cases was the actual measles of a severe nature. Had the nutritional state of these three children been satisfactory the probabilities are that they would have recovered.

Notes on cases of Measles which recovered. Ten cases of measles complicated by pneumonia were successfully treated during the year. These ten children were under three years of age.

Some of the children were dangerously ill on admission and it is not too much to assume that, by hospital treatment, some of these young lives were saved.

Skilled nursing is a very important factor in the treatment of complicated cases of measles and can be obtained only in a hospital. Cases left at home can not obtain this skilled attention for, though the District Nurses may attend them it is impossible for these nurses to give continued care to the childen each hour of the twenty-four.

Notes on Cases of Marasmus. This is a term applied to a condition of wasting in young children. The disease is so serious that, unless arrested, it ends fatally. An infant in an advanced stage of marasmus appears to consist of nothing but skin and bone. The powers of resistance to infection of such children are much below normal and catarrhal infections, bronchitis, or diarrhœa, are very liable to occur and terminate fatally. Treatment consists of warmth and attention to the minute details of diet. The number of cases of this nature admitted to the hospital during 1931 was 26, and of these 25 recovered.

A typical example of marasmus is that of a baby (T.A.V.) who, at the age of nine weeks, was admitted to hospital because of wasting and vomiting. His weight on admission was 5lbs. 12ozs. He probably weighed more at birth. This baby was kept in hospital for 3 months and, during this period, his weight increased to 12lbs. 10ozs. He has been kept under observation since discharge and continues to make satisfactory progress.

Another case of interest is R.H. On admission at the age of 6 months his weight was only 8lbs. 5ozs. This child remained in hospital for 5 weeks and gained 3lbs. 6ozs. in that period. Another severe case was G.J. who weighed 7lbs. only on admission at 4 months old. This child was critically ill for some weeks but eventually did very well, and, on discharge after 3 months in hospital his weight was 13lbs. 4ozs. One baby, who eventually recovered weighed 5lbs. 8 ozs. on admission at the age of 3 months. Another weighed 5lbs. 6½ozs at 4 months

Pink Disease. Two cases of this peculiar disease were under treatment in hospital during the year. Both children recovered.

MENTAL DEFECTIVES.

The lay press has recently given prominence to the question of the sterilisation of mentally defective persons. Sterilisation would, undoubtedly prevent those so treated from propagating but it should be realised that the elimination of mentally defective persons could not be attained by this means

A proportion of defective individuals are born of apparently normal parents. There may be one defective child among four or five normal brothers and sisters.

High grade defectives would not come under any scheme of sterilisation, yet high grade defective individuals may have low grade defective children.

The suggested method of sterilisation does not destroy the capacity for sexual intercourse. The risks of the dissemination of venereal disease by sterilised mental defective individuals might be very serious.

MATERNITY AND CHILD WELFARE.

The total attendances at the Child Welfare Centres during 1931 amounted to the large total of 20,115. This represents the actual attendances of infants and young children and takes no account of the visits of the mothers who bring the children. The average attendance per session was 83·1.

The number of medical consultations was 9,266.

ATTENDANCES AT CENTRES, 1931. TABLE 1.

Months	No. 1	No. 2	No. 3	No. 4	Ante-natal	Total
January ...	355	698	357	216	63	1689
February ...	323	708	323	217	72	1643
March ...	313	771	382	191	51	1708
April ...	392	546	240	215	58	1451
May ...	342	499	259	199	54	1353
June ...	345	948	483	236	64	2076
July ...	471	778	355	319	110	2033
August ...	308	655	327	178	95	1563
September ...	492	870	360	254	100	2076
October ...	401	790	328	324	126	1969
November ...	365	866	421	244	125	2021
December ...	367	627	273	184	100	1551
Total ...	4474	8756	4108	2777	1018	21133
Total 1930	4081	6688	3079	2532	779	17159
Average Attendance per Session, 1931	89·5	92·2	85·6	56·7	20·8	72·6
Average Attendance per Session, 1930	85·0	128·6	64·1	51·7	15·9	69·7

Excluding the Ante-Natal Centre, the average attendance per session was 83·1.

TABLE 2.

This table shows details of the primary and repeat visits.

Of 1417 births notified, 919 infants were brought to the various Centres. This is a percentage of 64·8. If from the total of 1417 the number of outward transfers is deducted and also the number of infants who died during the first four weeks of life, a figure of 1,326 is obtained. This latter figure represents the number of infants who could be brought to the Child Welfare Centres. The number, 919, who actually did attend, represents 69% of that figure.

This percentage shows how popular the Centres are among the mothers.

The number of repeat visits made by children under and over a year is increasing and shows that the mothers are anxious to have their children kept under continued supervision.

It is satisfactory to be able to report that the general health of the children is definitely improving. Severe rickets is now almost unknown and the manifestations of minor rickets are much less common than was the case a few years ago. The incidence of dental decay among five year old children shows a decline.

Attendances at Centres, 1931. Table 2.

		INFANTS						ANTE-NATAL ATTENDANCES			TOTAL ATTENDANCES	
		Primary			Repeat							
Month	No. of Births Notified	Under 1 yr.	Over 1 yr.	Total	Under 1 yr.	Over 1 yr.	Total	Pri-mary	Re-peat	Total	1931	1930
Jan.	139	99	7	106	904	616	1520	21	42	63	1689	1345
Feb.	122	83	12	95	900	576	1476	19	53	72	1643	1274
March	142	80	5	85	981	591	1572	6	45	51	1708	1369
April	122	82	15	97	790	506	1296	16	42	58	1451	1355
May	106	64	7	71	766	462	1228	7	47	54	1353	1382
June	120	88	22	110	1123	779	1902	14	50	64	2076	1353
July	101	94	16	110	1065	748	1813	26	84	110	2033	1597
Aug.	130	61	10	71	800	597	1397	16	79	95	1563	1104
Sept.	120	86	15	101	1079	796	1875	20	80	100	2076	1823
Oct.	100	62	18	80	989	774	1763	32	94	126	1969	1763
Nov.	103	64	21	85	1001	810	1811	24	101	125	2021	1420
Dec.	112	56	12	68	778	605	1383	19	81	100	1551	1374
Total	1417	919	160	1079	11176	7860	19036	220	798	1018	21133	17159
1930	1579	882	209	1091	8987	6302	15289	161	618	779	17159	—

HOME VISITS PAID BY HEALTH VISITORS, 1931.

Months	To Infants under 1.		To Children.	To expectant Mothers.		Total Visits Paid	Total Visits 1930
	First Visits	Total	1–5 Total	First Visits	Total		
January	126	497	833	23	40	1370	1704
February	108	535	783	20	32	1350	1291
March	121	612	877	12	25	1514	1458
April	131	543	828	16	27	1398	1592
May	90	498	713	11	22	1233	1688
June	89	407	653	11	28	1088	1429
July	114	658	1184	24	63	1905	1506
August	98	891	1413	19	50	2354	1186
September	108	421	746	10	26	1193	1363
October	92	513	1131	24	55	1699	1577
November	92	379	666	15	26	1071	1744
December	82	483	956	15	32	1471	1347
Totals	1251	6437	10,783	200	426	17646	17,885
Total 1930	1474	6382	11,048	218	445	17,885	—

The foundation on which the whole structure of child welfare work is built is, unquestionably, the work done by the health visitors in the homes of the people. Without the careful and conscientious routine work of the health visitors in the homes of the people it would be impossible to get results worthy of the financial expenditure involved. It appears to me only fair to acknowledge the debt which the service owes to the staff of health visitors. The high esteem in which the mothers hold the service is largely due to these hard working individuals.

INFANT MORTALITY.

Net Deaths from stated causes at various ages under 2 years of age, 1931.

CAUSES OF DEATH	Under 1 Week	1-2 Weeks	2-3 Weeks	3-4 Weeks	Total under 4 weeks	4 weeks and under 3 months	3 months and under 6 months	6 months and under 9 months	9 months and under 12 months	Total deaths under 1 Year	12 months and under 15 months	15 months and under 18 months	18 months and under 21 months	21 months and under 24 months	Total deaths under 2 years
Diphtheria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	1	1	3	5	...	1	3	...	9
Whooping Cough	...	...	...	...	...	...	1	1	...	2	...	1	1	...	4
Tuberculous Meningitis	...	..	..	...	...	...	1	2	...	3	...	1	1	...	5
Abdominal Tuberculosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases	...	...	...	...	...	...	...	2	...	2	...	...	...	...	2
Convulsions	3	...	1	...	4	...	2	1	...	7	1	1	...	...	9
Bronchitis	...	...	...	...	...	2	...	1	1	4	1	...	1	...	6
Pneumonia (all forms)	...	...	...	...	...	4	3	6	6	19	10	11	2	6	48
Diarrhœa	...	...	...	...	...	...	...	...	1	1	...	...	...	...	1
Enteritis	...	1	...	...	1	1	1	2	...	5	...	...	...	...	5
Gastritis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Syphilis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rickets	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Atelectasis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Congenital Malformations	3	...	1	...	4	2	...	...	...	6	...	...	...	...	6
Premature Birth	20	2	1	1	24	2	...	...	...	26	...	...	...	...	26
Atrophy, Debility, and Marasmus	4	...	1	1	6	3	2	1	...	12	1	...	...	...	13
Inanition	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Overlaying	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Want of Attention at Birth	1	...	...	...	1	...	...	...	...	1	...	...	...	...	1
Violence	...	...	...	...	...	...	...	...	1	1	...	...	1	...	2
Other Causes	4	2	...	...	6	1	...	3	3	13	1	3	1	...	18
TOTALS	35	5	4	2	46	15	11	20	15	107	14	18	10	6	155

Deaths at ages under 1 month. From the foregoing table it will be seen that 46 infants died before completing four weeks of separate existance.

In 12 of these cases prematurity appears to have been the cause of the non-survival. In at least four cases difficult instrumental delivery was responsible for the child's death. In 11 cases there was a definite history of ill health in the mother during the pregnancy, and in eight cases there was present some congenital defect in the child.

Deaths at ages between 1 and 12 months. Sixty-one children died at ages between 1 and 12 months during the year.

In the following table the monthly age at death and whether or not the child had attended the Child Welfare Centre, is shown.

Months	1	2	3	4	5	6	7	8	9	10	11	Total
Attended Centre	—	4	—	1	—	2	3	3	4	—	2	19
,, once only	1	—	3	—	—	1	—	—	3	—	2	10
Did not attend Centre	9	1	2	4	1	3	7	1	—	2	2	32
Totals	10	5	5	5	1	6	10	4	7	2	6	61

The percentage of the above children who attended the Child Welfare Centres is 31. It will be noted that the number of deaths occurring among children who had never attended the Centres was much higher than among those who did attend. The 32 deaths among non-attenders occurred in an infant population of less than half that attending the Centres.

The rates work out as follows :—

Infant deaths (per cent) among Centre babies	2·06
,, ,, ,, non-Centre babies	6·42

For practical purposes a child who has attended once only might be classified as a non-attender, but these cases have been excluded from both categories.

ANTE-NATAL CENTRE.

By means of continued supervision of expectant mothers it is possible to increase the probability of a normal and safe delivery. This is a tremendous boon to women and, as such, is realised by a yearly increasing number of them.

The popularity of the Ante-Natal Centre is causing difficulty in that the number of attendances per session is now greater than can adequately be dealt with. The position now is that the safeguards against the difficulties and dangers of pregnancy and delivery are becoming less sure because of hurried work.

At one session 45 women attended, of which number 11 were new cases. It is idle to pretend that such a number can be properly dealt with by one medical officer. The mere attendance at an ante-natal centre is valueless unless the medical officer can give detailed consideration to each individual case. In fact such overcrowding may be directly harmful in that a false sense of security and safety may be engendered in the minds of the women attending. The ante-natal centre enjoys a very high repute among the women of the town and they, quite rightly, judge its value by the results obtained. Hurried work will inevitably result, sooner or later, in some obstetrical disaster which will greatly discount the reputation of the work and value of the centre.

The work of an ante-natal centre is of such enormous importance that the Maternity and Child Welfare Committee should give serious consideration to the above paragraphs with a view to the provision of additional sessions.

The Ante-Natal Centre is held on one afternoon each week at the Oxford Terrace Centre. During the past year 241 women attended. Of this number 220 were new cases and the total number of attendances was 1,018. The number attending for the first time during 1931 was 59 greater than in 1930.

The following table shows the monthly attendances at the Ante-Natal Centre during the year, 1931.

Months	Primary	Repeat	Total
January	21	42	63
February	19	53	72
March	6	45	51
April	16	42	58
May	7	47	54
June	14	50	64
July	26	84	110
August	16	79	95
September	20	80	100
October	32	94	126
November	24	101	125
December	19	81	100
1931	220	798	1018
1930	161	618	779

Average attendance per session, 1931, ... 20·8

" " " 1930, ... 15·9

One hundred and forty-six women who had attended the Centre gave birth to children during the year. 122 of these were returned as normal deliveries, 15 required instrumental aid, there were two Cæsarian sections, one induced labour, and seven still-births.

The following table shows the number of the pregnancy and the manner of termination of the pregnancy of women attending the Ante-natal Centre.

Number of Pregnancy	Normal Delivery	Instrumental Delivery	Cæsarian Section	Induced Labour	Still-Births	Abortion	Not Pregnant	Not yet Delivered	Left Town	Total
1st	23	11	1	1	3	1	—	17	1	57
2nd	31	2	—	—	1	—	3	12	3	52
3rd	20	1	1	—	—	1	—	16	—	40
4th	10	—	—	—	—	2	1	9	—	22
5th	14	—	—	—	1	—	—	6	2	23
6th	10	—	—	—	1	—	—	8	1	20
7th	2	—	—	—	1	—	—	5	—	8
8th	5	—	—	—	—	—	—	1	—	6
9th	2	—	—	—	—	1 miscarriage	—	2	—	5
10th	3	1	—	—	—	—	2	—	—	5
11th	1	—	—	—	—	—	—	—	—	1
15th	1	—	—	—	—	—	—	—	—	1
17th	—	—	—	—	—	—	—	1	—	1
	122	15	2	1	7	4 & 1 miscarriage	6	77	7	241

Eleven of the instrumental deliveries occurred in primiparae (first babies) and in eight of these cases external pelvic measurements indicated some degree of pelvic contraction. Five of the eleven attended irregularly, two attending only once, and two only twice. In one case albuminuria was present. The percentage of cases in which instrumental delivery occurred was 10·2. If the primiparae are excluded, the forceps rate was 2·7%.

Still-births. Seven cases. The following are some notes on these cases :—

(1.) Seventh pregnancy. She had had three previous still-births. She attended once only, so no conclusions can be drawn as to the efficacy of ante-natal care in this case.

(2.) Second pregnancy. Attended once only. She had a premature still-birth.

(3.) Second pregnancy, attended for five weeks. The presence of twins was diagnosed. One twin was born normally, the other instrumentally. This latter twin was still-born.

(4.) Attended once at the 8th month. She was delivered of an anencephalic, still-born child. This condition is incompatible with life and all such children are born dead or die within a few hours of birth.

(5.) Attended once at the 8th month. She was delivered of a full-time, still-born child. No details are available.

(6). Attended twice with slight ante-partum hæmorrhage. Arrangements were made for her admission to the Robson Maternity Home but the child was born dead.

(7.) Attended twice during her first pregnancy. A severe degree of contracted pelvis was diagnosed, Unfortunately she ceased to attend, though the importance of continued supervision was explained to her. Craniotomy was performed by a practitioner who was called in after the woman had been in labour for a long time.

In none of these cases was ante-natal supervision sufficiently prolonged to influence the course of the pregnancy. From the experience gained during the past few years in ante-natal work, it does not seem to unreasonable to state that early and continued supervision would have saved the lives of some of these infants.

Puerperal Sepsis. The administration of Vitamin A has, by some observers, been found to affect materially the incidence of septic conditions following childbirth. Detailed records of the temperatures of the women who received Vitamin A at the ante-natal centre are not available, but no notification of puerperal pyrexia or puerperal sepsis was received concerning them.

Neo-Natal Deaths. The following are some notes on infants who died within four weeks of birth and whose mothers attended the Ante-Natal Centre.

(1). A woman of 40 years. When first attended had symptons which pointed to the menopause as the cause of amenorrhœa. At the fifth month pregnancy was definitely recognised and the patient was given Adexolin. Did not return until the 7th month and then only made one attendance. During the interval she had been admitted to the Stockton and Thornaby Hospital for an abdominal operation. A normal delivery occurred two months after her last visit to the Ante-Natal Centre. The child died at the age of two weeks and the certified cause of death was prematurity. Of four previous confinements, three had been instrumental deliveries.

Number in household, two adults and three children. Income 30/- per week. Rent 10/3 per week.

(2.) A woman of 36 years. First attended when about seven months pregnant. Adexolin for one fortnight only. Premature birth. Normal delivery, Child lived 12 hours. This was her ninth child.

(3.) A woman of 25. Husband working. Wage £2 5s. 0d. Attended at third month. Complained of rheumatism and abdominal pain. Examination showed pyelitis to be present. During the remainder of the pregnancy this woman was in ill health. She had anaemia and recurrent kidney trouble. Attended the ante-natal centre regularly except for one intermission of two months during which she was under medical treatment by her own doctor. Pelvic measurements small but had normal delivery. The child died at the age of two weeks and the cause of death was given as "Convulsions." No information available as to the condition of the placenta. Had a total of about 10 weeks treatment with Adexolin. First pregnancy.

(4.) A woman of 25 years. First attended when six months pregnant but ceased to attend at seven months. Had some abdominal tenderness probably due to salpingitis. Adexolin for three weeks only. Normal delivery but child had spina bifida and only lived a few hours.

(5.) A woman of 20 years. Second pregnancy. First attended when seven months pregnant. Had Adexolin for five weeks. Normal delivery. Child died on third day. Cause of death as stated on certificate " Convulsions, Congenital Debility and Prematurity."

Abortions and Miscarriages. Five cases.

(1.) Attended twice. Aborted at three months. Cause unknown.
(2). ,, once. ,, four ,, ,,
(3). ,, once. ,, three ,, ,,
(4). ,, once. ,, three ,, ,,
(5). ,, three times. Miscarriage at six months. Cause unknown.

Very little information is available in respect to these cases. The possibility of deliberate termination of pregnancy can not be ignored in some, at least, of the cases.

Nutrition and Child-bearing. Animal experiments have shown that the chance of survival of offspring is related to the nutritional state of the mother. If the maternal diet is defective in certain respects, premature births, still-births, and probably, congenital debility, are liable to occur.

Many of the women who attend at the Ante-natal Centre are existing on a diet which is definitely deficient in certain elements, and it has appeared to me that it should be the function of an ante-natal centre to attempt to assess the effects of such deficiencies. The problem is a difficult and complicated one as detailed controlled information is not easy to obtain. It is not practicable to supply the expectant mothers who come to the centre with a complete diet, but attempts have been made to supply two of the factors which appear to be definitely lacking in quantity. For three years a proprietory preparation (Adexolin) has been provided, either free or at cost price, to many of the women attending. This preparation is in the form of small capsules and contains active Vitamins A and D.

This preparation was taken by women for varying periods of time. It was hoped that each woman would take it for at least three months but in some cases this period was not attained, though in others it was exceeded.

It is not easy to assess scientifically the effects of the ingestion of these two vitamins by the women attending the Centre, but there is a general concensus of opinion among the women that the actual duration of labour is curtailed as a result of taking them; and many women do, in fact, attend the centre because they have been advised by their friends to do so in order that they may obtain the preparation.

Supervision of Midwives. At the end of the year 1931, there were 21 midwives practising in the Borough, including four at the Robson Maternity Home and one at the Public Assistance Committee's Hospital.

These midwives attended 1,007 cases as midwives during the year and 164 as maternity nurses. (These figures include 268 births attended by midwives in the Robson Maternity Home and 52 births attended by midwives in the Home acting as maternity nurses.)

During the year, medical help was sent for by midwives on 428 occasions. The percentage of births attended by midwives in which it was found necessary to call in medical aid was therefore 42·5, or if the cases occurring in the Robson Maternity Home are excluded, 57·9%.

371 accounts were received from doctors in respect of fees for attendance on cases in which they had been summoned by midwives. The total amount of these accounts was £613 11s. 6d. In 64 cases, or 15% of the cases in which they were called in, notices were received from doctors stating that they considered it necessary to continue atttendance on the patient for a longer period than 10 days.

The following notices were received from midwives during the year :—

Artificial feeding	13
Stillbirth	19
Liability to be a source of infection ...	7
Death of child	18
Death of mother	1
Puerperal fever	1
Puerperal pyrexia	2

Twenty-eight inspections of midwives were made during the year.

Robson Maternity Home. The number of beds provided at the Home is twelve.

The scheme for the extension of the Home which was described in my Annual Report for last year, was again under consideration during 1931. It was suggested that as the present site is fully built up and rather congested, it might be advantageous to build a new Maternity Home providing greater accommodation, and neighbouring Local Authorities were approached with a view to their participation in the scheme. It was decided, however, on the ground of economy, not to proceed with the matter at the present time.

The fee ordinarily charged to patients is 35/- for a period of twelve days which is the normal duration of stay.

Emergency cases are admitted to the Home from the Billingham Urban District, under agreement, at a fee of £3 : 3 : 0 per week per patient.

The Home continued to function satisfactorily during the year. Information with regard to the working of the Home during 1931 is given below.

Number of maternity cases admitted during the year	331
Average duration of stay	12·9 days
Number of cases delivered by midwives	268
„ „ „ doctors	52
Number of cases in which medical assistance was sought by a midwife in emergency	69

Number of cases notified as—

Puerperal Fever	Nil
Puerperal Pyrexia	4
Number of cases of Pemphigus Neonatorum	Nil
Number of infants not entirely breastfed while in the Institution	5
Number of cases notified as Ophthalmia Neonatorum	Nil
Number of maternal deaths	2

Causes of death—(1) Shock following ante-partum hæmorrhage.

(2) Valvular disease of the heart; embolic infarct twelve hours after labour; labour induced.

Number of feotal deaths—

(i) Stillborn	15
(ii) Within 10 days of birth	9

Causes of death in each case—

Stillbirths.		Deaths within 10 Days.	
Macerated	5	Prematurity	5
A.P.H.	3	Hydrocephalus	1
Difficult deliveries	3	Hydramnios	1
Prematurity	3	Difficult labour	2
Toxæmia of mother	1		

BREAST FEEDING.

The normal food for the young human infant is breast milk, yet many mothers are unable to nourish their own children.

Constant attention is given to the question of breast feeding by the health visitors in the homes of the mothers, and by the medical officers at the various Child Welfare Centres. In spite of this concentration upon the subject, the breast milk fails in many instances, and artificial feeding has to be resorted to. Fortunately our modern knowledge of infant nutrition is such that artificial feeding can be carried on without much risk to the welfare of the infant. Yet artificial feeding can not, in every respect, approximate in desirability to adequate breast feeding.

What are the causes of failure on the part of the mother to feed her infant ? Some of the causes are known ; others, which are not definitely proved, can be fairly accurately deduced.

One of the common causes of failure to breast feed lies in the failure to establish lactation during the first ten days after the birth of the child. This failure can, in many instances, be attributed to lack of perseverence and insistence upon the part of those in charge of the case. The staff of the Robson Maternity Home pay particular attention to this factor and it is an exceedingly rare occurrence for a notification of artificial feeding to be received from this institution. This point will be further discussed in a subsequent paragraph.

Another cause of failure to continue breast feeding is anxiety on the part of the mother. She thinks that a baby which is cross is undernourished, and, on the advice of relatives and friends, she starts supplementing its feeds from the bottle. Probably the child was cross because of overfeeding. Interference by relatives is also a cause of discontinuance of breast feeding. An elderly relative or a neighbour tells the mother that the breast milk does not suit the child, and a young mother will heed such advice.

An occasional cause of discontinuance of the natural method of feeding is the occurrence of a breast abscess which requires surgical interference.

In addition to the above causes, there remains a large number of cases in which the quantity of breast milk decreases and the infant does not, as a consequence, thrive in a normal manner. The milk may also be deficient in certain qualities apart from mere quantity.

Experimental work on animals has shown that the ability of female animals, such as rats, to nourish their young, is dependent upon the nature of the maternal diet. It appears reasonable to assume, and clinical experience lends support to this view, that the observations on animals applies to human beings. It can not be disputed that many women are to-day living on a diet which falls much below what may be considered a satisfactory one,

It was mentioned above that the women who have been confined in the Robson Maternity Home rarely fail to feed their children during their period of stay in the home. Though this may, in part, be due to the very great care taken by the staff to establish lactation, yet it appears to me that the adequate and ample diet which the patients in that institution receive may play a very substantial part in the ability of the breasts to function. Some of the women who have had their babies in the Home are unable to feed them when they return to their own homes owing to the inadequate diet which is necessitated by an income which is insufficient to provide a sufficient quantity and variety of food.

The above statement will not meet with general approval, but the fact must be faced that the nutrition of the people, and of the mothers in particular is, in many instances, below a reasonable physiological level. It seems to be a great reflection on modern civilization that there is on the one hand an abundance of commodities, and on the other a considerable proportion of the community whose health and well-being is suffering from lack of these commodities.

BIRTH CONTROL.

I have been approached, during 1931, by various persons, and representatives of certain organisations, on the subject of the teaching of birth control methods at Child Welfare Centres.

As there appears to be some confusion of thought and ideation on this subject, it appears to me to be desirable that I should comment on it.

The official attitude of the Ministry of Health to the teaching of birth control methods by the medical staff of Local Authorities is quite clear and definite. Contraceptive methods can be taught by medical officers only to individual women in whom future pregnancies would definitely be dangerous to health. It is quite clear that the Ministry is considering purely medical, and not general economic, conditions. When consideration is given to the present state of our knowledge of contraception and of racial economics, it would appear that the attitude of the Ministry is the only proper one to adopt under existing circumstances. The confusion which exists in the public mind between the economic and medical aspects of contraception has led to the existing differences of opinion upon the attitude of the Ministry of Health.

Religious, ethical and moral considerations are outside the scope of these notes but would be given considerable weight by many members of the public.

The purely medical, as apart from economic justifications of contraception are much less common than is popularly conceived.

The arguments which have been placed before me in support of official facilities for the teaching of contraception are mainly as follows—'The rich can obtain contraceptive knowledge from private doctors but the poor are unable to pay for this knowledge. Knowledge should be available for all. That many women are debilitated by the strain of trying to care adequately for large families on insufficient financial resources. That children should not be produced unless the parents are in a position to feed, care and clothe them properly. That the country is overpopulated and a decreased birth-rate would be beneficial.'

It will be noted that the substance of the above arguments is economics and not medicine.

The users of the above arguments are not aware that the present knowledge of contraceptive methods is much less exact than is commonly supposed; that very many medical officers and private practioners have no special knowledge of the subject and are unable to give instruction in it; and that the desired results are not obtained in a considerable proportion of cases. The published reports of contraceptive clinics are far from unanimous as to the success of the teaching given at such establishments.

The successful application of contraceptive teaching consists of much more than mere knowledge. The various methods at present advocated require care and intelligence in their application and necessitate the use of various appliances and preparation which have to be renewed at fairly frequent intervals at some cost of money.

The public should be disabused of the belief that satisfactory knowledge of contraceptive methods can be taught in a few minutes.

The question as to whether a low birth-rate would be beneficial to the community is a matter of practical economics and is no more a medical question than is the provision of old age pensions. Also, it is equally a matter of economics that a woman with a small and uncertain income may become ill and debilitated by nursing a large family of young children. The remedy in this case falls within the realm of economics. If her economic status were improved, the mere fact of numerous pregnancies need not, and in fact is not, harmful to the great majority of women.

The establishment, or non-establishment, of centres or clinics where contraceptive teaching would be available for those who desire it, is dependent upon a settled economic policy and not upon medical needs.

Were it decided, on economic grounds, that such instruction should be made available, it is, in my opinion, highly undesirable that this instruction should be given at, or associated with, in any way, the existing maternity and child welfare service.

The maternity and child welfare service was established with the intention of bettering the condition of women in childbirth and for furthering the nurture of infants and young children. The high esteem which the service enjoys among women is proof that recognition is given to the avowed objects of the service. To graft on to this service a totally different object, might have certain deleterious effects. Many women would refuse to attend the clinics if birth control were taught at those clinics. The religious teaching of the Roman Catholic Church on the matter of birth control is, I am given to understand, absolute, and the association of the subject of contraception with the child welfare service would result in the prohibition of the attendance of Roman Catholic women at all centres and clinics. This would apply, though probably with less completeness, to other religious denominations.

My views on the whole subject may be summed up as follows :- The teaching by the State of birth control, should be dependent upon economic, and not medical, arguments. If such teaching were officially undertaken, then under no circumstances, should it be associated with the existing maternity and child welfare service.

DISEASES OF ANIMALS ACTS.

Foot and Mouth Disease. On June 19th, 1931, the Great Britain (Foot and Mouth Disease) Regulation of Movement Order was issued. This Order prohibited the movement of animals in any part of Great Britain except by licence. On the same date an outbreak of Foot and Mouth Disease occurred at Cowpen Bewley and an infected area of fifteen miles radius from the infected place was put in operation. Nine cattle from the infected farm had been exposed for sale in the Stockton-on-Tees Auction Mart on June 17th, and a further eight grazing cattle from this farm had been brought into the Borough from Haswell Auction Mart on June 15th. The whole of the animals which had been in Stockton Auction Mart on June 17th were traced and either had been, or were, eventually slaughtered by the owners. Those from Haswell Auction Mart were placed under Form D and kept under observation. Owing to this outbreak of Foot and Mouth Disease the Stockton-on-Tees Auction Mart was closed for three weeks and was re-opened on July 15th.

During the period these restrictions were in force licences were issued for 420 fat cattle, 1649 fat sheep, 238 fat pigs, 9 fat calves, 295 dairy and store cattle, 309 store sheep and 3 store pigs.

Swine Fever. On June 9th, the Ministry of Agriculture and Fisheries issued the County Durham, Yorkshire (North Riding) and City of York Swine Fever Infected Area Order of 1931. Under this Order, markets for swine could only be held when authorised by the Local Authority and were restricted to fat swine for immediate slaughter and these could only be brought in if accompanied by a licence. Stores could only be moved after a special declaration form had been signed by the owner. This Order was not revoked until 16th September, 1931.

39 reports of suspected swine fever were received during the year, and on investigation 16 were placed under Form A, 18 under Form B and 5 were obviously not swine fever. In all these cases the swine had been imported into the Borough while in the incubation stage, from premises on which the disease subsequently developed. The 34 premises under restriction were kept under observation for periods of from one week to three months.

During the year 1931 the following licences were issued under the Regulation of Swine Movement Order, 1922, compared with the figures for the previous year.

	Number of Licences issued.		Number of Swine moved.	
	1931	1930	1931	1930
Fat Swine	1970	1397	10404	8165
Store ,,	1334	1275	7932	7191
	3304	2672	18336	15356

Licences under the Regulation of Swine Movement Order, 1922, for swine moved out of the Borough of Stockton-on-Tees.

	Number of Licences issued.		Number of Swine moved.	
	1931	1930	1931	1930
Fat Swine	1087	868	6240	5141
Store ,,	1045	924	6572	5501
	2132	1792	12812	10642

Licences under the Regulation of Swine Movement Order, 1922, for swine brought into the Borough of Stockton-on-Tees.

	Number of Licences issued.		Number of Swine moved.	
	1931	1930	1931	1930
Fat Swine	252	177	2011	1424
Store ,,	55	47	348	279
	307	224	2359	1703

Sheep Scab. Two outbreaks occurred in the North Riding of Yorkshire and from these 92 contact sheep had been exposed in the Stockton-on-Tees Auction Mart, three markets being affected. The sheep were all traced and the necessary action taken.

Importation of Animals Act, 1922. Four consignments, totalling 58 head of cattle, were brought on to farms in the Borough under the above Act. In each case the Quarantine Regulations were properly carried out by the owners.

Importation of Dogs and Cats Order, 1928. Twelve notifications were received from the Customs Officers of ships arriving with dogs on board. These were all kept under control during the stay of the vessels.

Transit of Animals (Amendment) Order, 1931. This Order provides for the construction, cleansing, and disinfecting of road vehicles used for the carrying of animals and for the keeping of records by the owners of same. It empowers Local Authorities to provide forms of record for road vehicles and to cleanse and disinfect road vehicles and to make a charge reasonably sufficient to cover the cost of so doing. The charge for cleansing and disinfecting at the Stockton Auction Mart is sixpence for motor vehicles and threepence for horse drawn vehicles. This charge came into operation on November 5th, 1930. The amount collected between November 5th and December 31st, 1930, was £12/4/6, and for the period January 1st to December 31st, 1931, £75/2/3. 3,969 vehicles were cleansed and disinfected. This represents an average of 81 vehicles for each of the 49 markets, but this does not fully represent all the vehicles using the markets, as only certain types of vehicles come within the provisions of Order for cleansing, and a large proportion of the cleansed vehicles again use the market for loading. In all some 8,856 vehicles entered the market during 1931, the highest individual day being 274 and the lowest 59 vehicles.

Conveyance of Live Poultry Order, 1911. This Order has been reasonably well carried out by the dealers, and the rigid type of carrier is now greatly used.

Packing Materials Order, 1925. With one exception very few serious complaints have been received under this Order, and the firm in question have now installed a baling press and made a contract for the destruction of the materials.

Transit and General Order, 1917. The cleansing of cattle trucks, boxes, storage pens and yard has been well carried out by the L. & N. E. Railway Company during the year. A permanent staff is now being kept for this purpose by the Company.

Movement of Animals (Records) Order. No serious trouble has been experienced under the Order during the year.

No cases of Anthrax, Parasitic Mange, Glanders or Farcy, Rabies or Sheep Pox occurred during the year.

Cattle Market. The following table shows the number of animals which passed through the Cattle Market during the year 1931, compared with the previous four years.

	1931	1930	1929	1928	1927
Milch Cows ...	560	616	724	836	1006
Fat Cattle ...	4962	5600	5045	5453	5311
Grazing Cattle	403	417	429	411	610
Calves ...	1010	1187	1323	1114	968
Sheep and Lambs	27500	28258	29385	27771	29553
Swine ...	16880	14739	16634	18670	14810
Total ...	51315	50817	53540	54255	52258

APPENDIX.

Birth-rate, Death-rate, and Analysis of Mortality during the year 1931.
(Provisional figures.)

(The mortality rates for England and Wales refer to the whole population but for London and the towns to civilians only.)

—	Rate per 1,000 Total Population		Annual Death-rate per 1,000 Population.									Rate per 1,000 Live Births		Percentage of Total Deaths			
	Live Births	Still-Births	All Causes	Enteric Fever	Small-pox	Measles	Scarlet Fever	Whooping cough	Diphtheria	Influenza	Violence	Diarrhœa and Enteritis (under 2 yrs.)	Total Deaths under 1 year	Certified by Registered Medical Practitioners	Inquest Cases	Certified by Coroner after P.M., No Inquest	Uncertified Causes of Death
England and Wales	15·8	0·67	12·3	0·01	0·00	0·08	0·01	0·06	0·07	0·36	0·54	6·0	66	91·18	6·17	1·70	0·95
107 County Boroughs and Great Towns, including London ...	16·0	0·67	12·3	0·00	0·00	0·10	0·01	0·07	0·08	0·33	0·48	8·4	71	91·43	5·84	2·24	0·49
159 Smaller Towns (1921 Adjusted populations 20,000—50,000) ...	15·6	0·73	11·3	0·00	0·00	0·07	0·01	0·05	0·05	0·36	0·43	4·0	62	92·17	5·49	1·25	1·09
London	15·0	0·50	12·4	0·01	0·00	0·03	0·02	0·07	0·06	0·26	0·57	9·7	65	89·52	6·23	4·24	0·01
Stockton-on-Tees	19·92	0 62	12·51	0·01	0·00	0·14	0·01	0·14	0·01	0·40	0·27	5·1	79	93·46	2·57	1·40	2·57

CAUSES OF DEATH IN STOCKTON-ON-TEES, 1931.

CAUSE OF DEATH	Total	Males	Females
ALL CAUSES	856	447	409
1—Typhoid and paratyphoid fevers	1	1	...
2—Measles	10	5	5
3—Scarlet Fever	1	...	1
4—Whooping cough	10	3	7
5—Diphtheria	1	1	...
6—Influenza	28	16	12
7—Encephalitis lethargica ...	4	2	2
8—Cerebro-spinal fever... ...	4	3	1
9—Tuberculosis of respiratory system	48	31	17
10—Other tuberculous diseases ...	20	10	10
11—Syphilis	1	1	...
12—General paralysis of the insane, tabes dorsalis	2	1	1
13—Cancer, malignant disease ...	89	40	49
14—Diabetes	4	1	3
15—Cerebral hæmorrhage, &c. ...	44	24	20
16—Heart Disease	158	86	72
17—Aneurysm	...	...	...
18—Other circulatory diseases ...	37	25	12
19—Bronchitis	35	20	15
20—Pneumonia (all forms) ...	90	47	52
21—Other respiratory diseases ...	18	12	6
22—Peptic ulcer	7	5	2
23—Diarrhœa, &c. (under 2 years)	7	3	4
24—Appendicitis	9	3	6
25—Cirrhosis of Liver	4	4	...
26—Other diseases of liver ...	...	...	...
27—Other digestive diseases ...	20	8	12
28—Acute and chronic nephritis ...	24	18	6
29—Puerperal sepsis	3	...	3
30—Other puerperal causes ...	5	...	5
31—Congenital debility, premature birth, malformations, &c. ...	45	24	21
32—Senility	31	16	15
33—Suicide	2	...	2
34—Other violence	17	5	12
35—Other defined diseases ...	65	30	35
36—Causes ill-defined or unknown	3	2	1
Special Causes (included in No. 35 above)—			
Small-pox	...	...	...
Poliomyelitis	...	...	...
Polioencephalitis	...	...	...
Deaths of Infants under 1 year—			
Total	108	54	54
Legitimate	102	52	50
Illegitimate...	6	2	4
LIVE BIRTHS—Total	1363	723	640
Legitimate	1299	686	613
Illegitimate...	64	37	27
STILL BIRTHS—Total	43	23	20
Legitimate	38	22	16
Illegitimate...	5	1	4

Resident Population (Registrar General's estimate) ... 68,400.